Section II.

B. Five Year Needs Assessment

1. Process for Conducting Needs Assessment

The determination of needs is an ongoing process, including the examination of capacity of the current systems. Assessing capacity is inherent to the administrative management of all MCH and CSHCN programs, requiring staff to evaluate the capacity of its directly managed services as well as the availability and accessibility of partnership services across the state.

The development of the Oklahoma needs assessment for the proposed grant period of federal fiscal years 2006 through 2010 was significantly different than in previous grant periods. In prior needs assessment development for Oklahoma, Maternal and Child Health (MCH) Assessment staff prepared an analysis of data identified to be pertinent to MCH and Children with Special Health Care Needs (CSHCN) issues. Following directions from the MCH and CSHCN staff, the evaluation of the data was organized and prepared for final review by all program staff. After initial needs determination, community input was sought to determine if other issues still needed to be addressed. This input was then used to create the final priorities and subsequent performance measures for the Title V Plan.

For the Program Years (PY) 2006-2010 assessment and plan, input from partners, communities, and interested entities was obtained at the onset of the needs assessment process rather than after the initial data had been analyzed. Prior to the initiation of the assessment, the Title V Program made the decision to create three teams to provide initial input for identifying issues among the three MCH populations. To accomplish this, the three groups were identified to come together and, independently of MCH staff, provide input on what they have observed to be issues, including services, systems, behaviors, and others. Individuals were selected to represent a broad spectrum of knowledge and concerns different than that of the regular MCH/CSHCN program staff. The process was designed to be an open dialogue and anyone requesting to participate was not denied. MCH staff did not participate in the process other than to facilitate group process. This was done to prevent discussions from being redirected toward programs and needs already being addressed by the MCH and CSHCN programs, thus creating unintended bias. The three teams were composed of state and local health department staff, external partners, other private and public service providers, advocates, consumers, and other agencies. Specific effort was made to involve families through the state's Family Voices network. Individuals were given the opportunity to participate in more than one of the three teams.

An initial staging conference was conducted in early summer 2004, offering the more than 80 participants a background of HRSA and Maternal and Child Health Bureau goals for Title V MCH programs. Instructions were provided, giving the three groups/teams general guidance on process, providing directions to return a list of priorities for each of

the three MCH population groups (maternal and infant health, child and adolescent health, and children with special health care needs), and setting deadlines for completing their tasks. The current priorities were intentionally omitted from the group process to prevent biases as each team identified issues that need to be addressed. At the close of the initial conference, each team met separately to determine its own course of action and to set subsequent meeting dates for identifying their issues. The deadline for final input to MCH/CSHCN was mid-October 2004. As part of the recommendations from each team, a summary of the process to reach those recommendations was required.

As one example of the group processes, the CSHCN team used the following approach. In 2003 and prior to the Summer 2004 conference, the CSHCN Program sponsored two community forums. These forums sought to broaden the range of input from the CSHCN population, service community, and stakeholders. The forums also served to increase and strengthen partnerships between the various aspects of the service community and with the CSHCN Program. There were over 80 people from across the state who attended. There were representatives from other state agencies serving the CSHCN population, professionals who work directly with the CSHCN population, parent advocates, caretakers, and other interested individuals. The group represented a wide range of expertise and experience. This was the first attempt of the CSHCN Program at the state level to bring together a cross-section of agencies and individuals who work with the CSHCN population.

During the forums, the CSHCN team chose to use a group process to gather the maximum amount of direct input from stakeholders and to build and enhance partnership and collaboration. For the first activity the facilitator asked the group to complete the sentence, “In Oklahoma, we want a system of care for children and youth with special health care needs and their families that…”. All ideas were put on large sheets of paper placed on the walls around the room. From this listing, four categories of priorities were developed: Funding, Lifespan Perspective, Partnering with Families, and Information Dissemination. The information from the forums was used as a building block for the needs assessment work group that was brought together in June through October 2004 to formalize the needs assessment project.

Approximately 40 people attended the first CSHCN needs assessment meeting in 2004, representing state agencies, CSHCN contractors, as well as parent advocates. The CSHCN Program was fortunate that many of the same individuals who participated in their previous community forums also participated in this work group. Recognizing that the time and efforts of the members of the group were valuable, the decision was made to do as much of the information exchange as possible by email. The facilitator explained the needs assessment and what the goal was for the entire process. All participants were asked to email to CSHCN what they thought the priorities were for the children of Oklahoma. CSHCN gathered the information and scheduled a follow-up meeting. At that meeting all information was presented and grouped according to the six current performance measures for CSHCN. The group reworked the list to eliminate duplication and narrowed the original list of 80 needs down to 33. Those 33 needs were then discussed with the group again to determine which ones represented the majority of the

CSHCN population (as opposed to small subgroups) and which ones had data and resources within the state to address the need.

In the fall of 2004, the MCH and CSHCN program staff convened to review the recommendations from the three teams. The facilitators from the three teams also participated to assist in interpreting the intent and scope of each summarized priority. The top three or four priorities from each target population were analyzed for significance and overlap with another population group's priorities, and then they were compared to the existing Title V priorities and agencies' goals. Because of the planned openness of the process, some priorities were narrowly focused (e.g. respite care), while others targeted issues of a broad nature (e.g. obesity). The MCH/CSHCN staff then summarized the results into ten general priorities for the Title V programs. In the spring, 2005, these results were again reviewed, comparing them to other known priorities (including those from the previous grant period) for both agencies and the MCH and CSHCN programs. This included reviewing the capacity of each agency and program to address the priorities given the financial resources, state legislative priorities, and agency priorities already known to the programs. A careful balance had to be considered when determining whether direct, enabling, population-based, or infrastructure services would be the best approach to improving outcomes for the MCH populations.

Subsequent to the open input process, the analyses and evaluation of data began for the purpose of documenting and quantifying needs. Data were analyzed from the following sources: population-based surveillance data from the Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS), The Oklahoma Toddler Survey (TOTS), the CDC-weighted Oklahoma Youth Risk Behavior Survey (YRBS), the Oklahoma First Grade Health Survey, and the Oklahoma Fifth Grade Health Survey; Oklahoma vital records; 2000 U.S. Census and Census population estimates; needs assessments of other Oklahoma MCH programs; private, non-profit health-based surveys or studies; agency program data from the Oklahoma State Department of Health (OSDH) and the Oklahoma Health Care Authority (Medicaid data); and other federal and state surveys. These data were reviewed and analyzed to assess need and to compare with the qualitative assessments provided initially by the three groups. The primary assessment of data included outcomes, intermediate outcomes, and process that included access to care and behaviors that are known to impact access to care and health status. Though not included in much of the documented assessment, MCH commonly compares its status with national averages and those states in the U.S. Department of Health and Human Services Health Resource Services Administration (HRSA) Federal Region VI and other adjoining states. When available, data are compared among the state's 77 counties. Because some reporting events are not common, multiple years must be used to review certain indicators; however, using too many years to build a reliable rate may mask temporal changes in a rapidly changing health system or economic environment.

For CSHCN issues, the State and Local Area Integrated Telephone Survey (SLAITS) data were consulted on an ongoing basis. Many of the organizations that deal with children with special health care needs in Oklahoma have highly detailed demographic information. This information was helpful when it came to dealing with the estimate of

CSHCN populations in various areas of the state. CSHCN had to extrapolate to achieve the CSHCN based information, assuming that the national percentages (13% to 18%) apply to the locally based data.

2. Needs Assessment Partnership Building and Collaboration

The identification of MCH state needs involves many partners from within the OSDH and external to OSDH. The MCH Service is administratively responsible for a variety of programs, including: the Teen Pregnancy Prevention Program; Family Planning Program; Child and Adolescent Health programs including School Health; Maternity Program including Fetal and Infant Mortality Review, SIDS, and Maternal Mortality Review; the Early Childhood Comprehensive Systems project, and the State Systems Development Initiative project. As such, these programs' end projects are integral to the broad scope of maternal and child health services.

Oklahoma is one of the seven grandfathered states where the CSHCN services are located in a separate agency, the Oklahoma Department of Human Services (OKDHS). Regular communication is maintained via routine staff meetings that include directors and other program staff. The CSHCN staff were full participants in the needs assessment process for the children with special health care needs component. Because many services provided by OSDH target special needs children, either through screening or early intervention services, open dialog is maintained for program planning purposes.

The MCH Service is also part of the Family Health Service (FHS) unit of OSDH, and this affords close, ongoing working relationships with programs that target the MCH populations. These programs include the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Dental Health, Screening and Special Services and SoonerStart, Family Support and Prevention Service (includes the Children First nurse home visitation program and the Oklahoma Child Abuse Prevention Program), and Child Guidance Service. Many collaborative activities are co-sponsored and/or co-funded by Title V and other MCH funds. In addition to the close working relationship with other FHS Services, MCH strives to routinely involve other programs through information-sharing and program planning. Regular meetings are scheduled with Community Health Services, the local health branch of OSDH. Standing invitations are given to Chronic Disease, HIV/STD, and Immunization program staff. This provides a forum for all to discuss needs, plans, and activities that are related to the MCH populations. The Child and Adolescent Health Division of MCH is in regular communication with the Injury Prevention Service due to common projects and the Oklahoma Safe Kids Coalition, which the MCH Service funds in part through staffing a position in the Program.

Partnerships with other agencies are fully supported and maintained. The Oklahoma Health Care Authority (OHCA), the state's Medicaid agency, collaborates almost weekly with the MCH programs regarding eligibility issues for the MCH populations. The working relationship between the two agencies is strong, and needs are shared routinely among the different levels of both agencies, including MCH leadership and staff. The MCH Service is currently an active participant with the OHCA in assessing barriers and other problems in providing prenatal care and delivery services to mothers across the state. MCH staff meet regularly with OHCA staff to organize and plan meetings for a state Perinatal Taskforce to identify problems and propose solutions. MCH was

intimately involved with the OHCA in getting a Family Planning waiver approved in early 2005 to expand Medicaid eligibility for family planning services to women and men up to 185% of the Federal Poverty Level. MCH continues to work with various OHCA staff in exploring avenues to address care to low income undocumented Hispanics who are in need of MCH-related services.

The working relationship between the MCH Child and Adolescent Health Division and the Oklahoma State Department of Education (OSDE) remains strong. Due to the lack of mandated school nurses, the OSDH works closely with the OSDE in providing education services to school-age children and in coordinating direct care services where possible. The OSDE-MCH relationship has just successfully administered its second statewide Youth Risk Behavior Survey (YRBS). Support provided between the two agencies has contributed to a school participation rate of 98 percent, one of the highest, if not the highest, in the country. The ongoing support of assessing behaviors among high school children has also enabled MCH to provide school-based YRBS surveys to assist school districts in identifying high-risk behavioral issues for local school systems to address with assistance from the OSDH.

The MCH programs have also worked collaboratively with the Oklahoma Primary Care Association and the Oklahoma Rural Health Association. The state continues to lag behind most states in the number of federally qualified health centers and rural health clinics. Recent attention has been given to this gap, and there has been considerable effort made in acquiring funding for additional centers and the corresponding health care services.

The results of the aforementioned collaborative partnerships are then used to review the status of the MCH needs, health status and access, and priorities. The same communication provides a mechanism for identifying gaps in capacity or in opportunities for improving efficiencies and finding other solutions to build capacity in direct, enabling, and population-based services.

3. Assessment of Needs of the Maternal and Child Health Population Groups

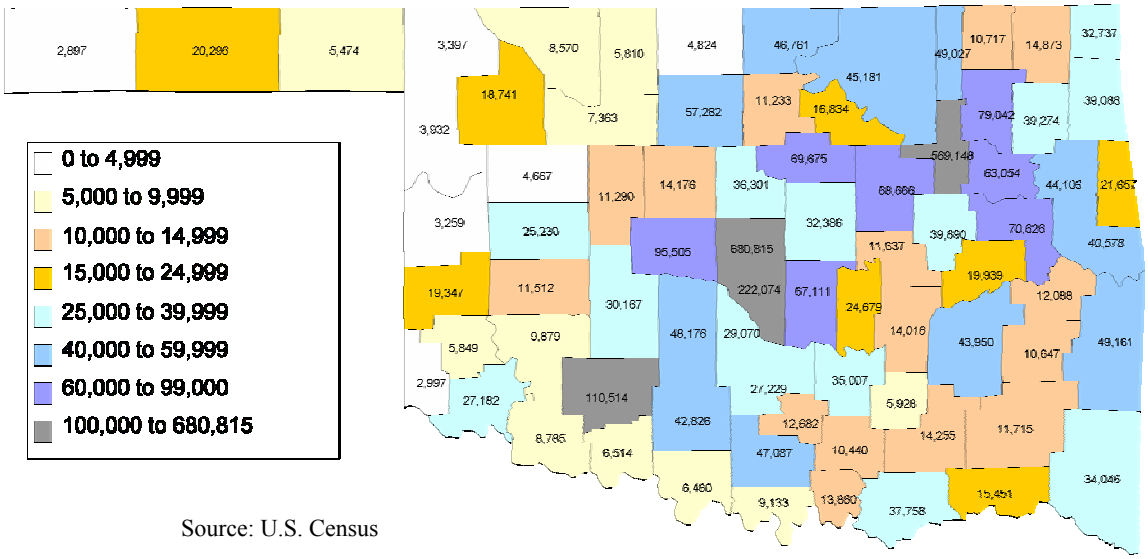
Note: Except where specified, vital statistics data were obtained from the OSDH Center for Health Statistics, and population data were obtained from the U.S. Census or the Oklahoma Department Of Commerce.

General Population Characteristics:

Oklahoma is a central plains state that blends many cultures from the groups of people who have settled within its borders. Its original heritage was drawn largely from the many Native American tribes that were displaced to Indian Territory in the latter half of the 1800s. Ultimately, 39 tribes were assigned areas within the boundary that eventually became Oklahoma. Though often classified together, these tribes represent many different cultures that vary from the plains tribes (Comanche, Arapaho, Cheyenne, Pawnee, Apache, etc.), to the Five Civilized Tribes, and to the many other tribes from the eastern regions of the U.S. and from the Great Lakes area. Following the opening of the land to others for settlement, both Caucasian and African American peoples were drawn to the area largely for agricultural reasons. The African Americans primarily settled in the eastern half of the state, while Western Europeans primarily settled the northern and western regions as a result of the land runs near the turn of the 20th century.

The large majority of Oklahoma people are socially conservative and many perceive themselves as being strongly independent, though their behaviors do not always conform to their attitudes. These qualities and the varied cultures must be understood and considered when identifying public health needs and practices across the state. Though national standards may define problems and barriers for maternal and child health issues, the perceived needs by the population and political structures require public health providers to be culturally aware when addressing sensitive issues.

Figure 1
Oklahoma 2004 population



Source: U.S. Census

Table 1. Annual estimates of the population for Oklahoma counties: April 1, 2000 to July 1, 2004

Source: U.S. Census Bureau

	Population Estimates				U.S. Census	Percent Change	Percent Change
	July 2004	July 2003	July 2002	July 2001	April 2000	2000-2004	Rank
Oklahoma	3,523,600	3,506,500	3,488,200	3,466,500	3,450,654	2.11	
Adair	21,700	21,600	21,400	21,200	21,038	2.94	16
Alfalfa	5,800	5,900	6,000	6,000	6,105	-4.83	68
Atoka	14,300	14,200	14,000	13,900	13,879	2.71	17
Beaver	5,500	5,500	5,600	5,600	5,857	-6.54	75
Beckham	19,300	19,300	20,000	19,900	19,799	-2.28	58
Blaine	11,300	11,300	11,700	12,100	11,976	-5.73	73
Bryan	37,800	37,200	37,000	36,700	36,534	3.35	13
Caddo	30,200	30,100	30,000	30,000	30,150	0.06	40
Canadian	95,500	92,900	91,100	89,700	87,697	8.90	3
Carter	47,100	46,500	46,100	45,700	45,621	3.21	14
Cherokee	44,100	43,800	43,400	42,900	42,521	3.73	11
Choctaw	15,500	15,300	15,400	15,200	15,342	0.71	34
Cimarron	2,900	3,000	3,000	3,100	3,148	-7.97	76
Cleveland	222,100	218,800	215,100	212,200	208,016	6.76	5
Coal	5,900	6,000	6,000	6,100	6,031	-1.71	57
Comanche	110,500	110,300	111,800	112,200	114,996	-3.90	65
Cotton	6,500	6,600	6,500	6,500	6,614	-1.51	54
Craig	14,900	14,900	14,800	14,800	14,950	-0.52	45
Creek	68,700	68,800	68,700	68,100	67,367	1.93	24
Custer	25,200	25,200	25,100	25,600	26,142	-3.49	62
Delaware	39,100	38,600	38,000	37,700	37,077	5.42	7
Dewey	4,700	4,600	4,600	4,700	4,743	-1.60	56
Ellis	3,900	4,000	4,000	3,900	4,075	-3.51	64
Garfield	57,300	57,100	57,200	57,300	57,813	-0.92	49
Garvin	27,200	27,200	27,300	27,100	27,210	0.07	38
Grady	48,200	47,400	46,800	45,900	45,516	5.84	6
Grant	4,800	5,000	5,000	5,100	5,144	-6.22	74
Greer	5,800	5,900	5,900	5,900	6,061	-3.50	63
Harmon	3,000	3,100	3,100	3,200	3,283	-8.71	77
Harper	3,400	3,400	3,500	3,400	3,562	-4.63	67
Haskell	12,100	12,100	11,800	11,800	11,792	2.51	18
Hughes	14,000	14,000	14,000	13,900	14,154	-0.97	50
Jackson	27,200	27,300	27,400	27,900	28,439	-4.42	66
Jefferson	6,500	6,500	6,500	6,600	6,818	-5.25	70
Johnston	10,400	10,500	10,400	10,400	10,513	-0.69	46
Kay	46,800	47,300	47,700	47,500	48,080	-2.74	60
Kingfisher	14,200	14,100	13,900	13,900	13,926	1.80	25
Kiowa	9,900	10,000	10,000	10,100	10,227	-3.40	61
Latimer	10,600	10,500	10,600	10,600	10,692	-0.42	44
LeFlore	49,200	48,900	48,600	48,200	48,109	2.19	22
Lincoln	32,400	32,300	32,300	32,100	32,080	0.95	32
Logan	36,300	35,600	34,900	34,600	33,924	7.01	4
Love	9,100	9,000	8,900	8,800	8,831	3.42	12

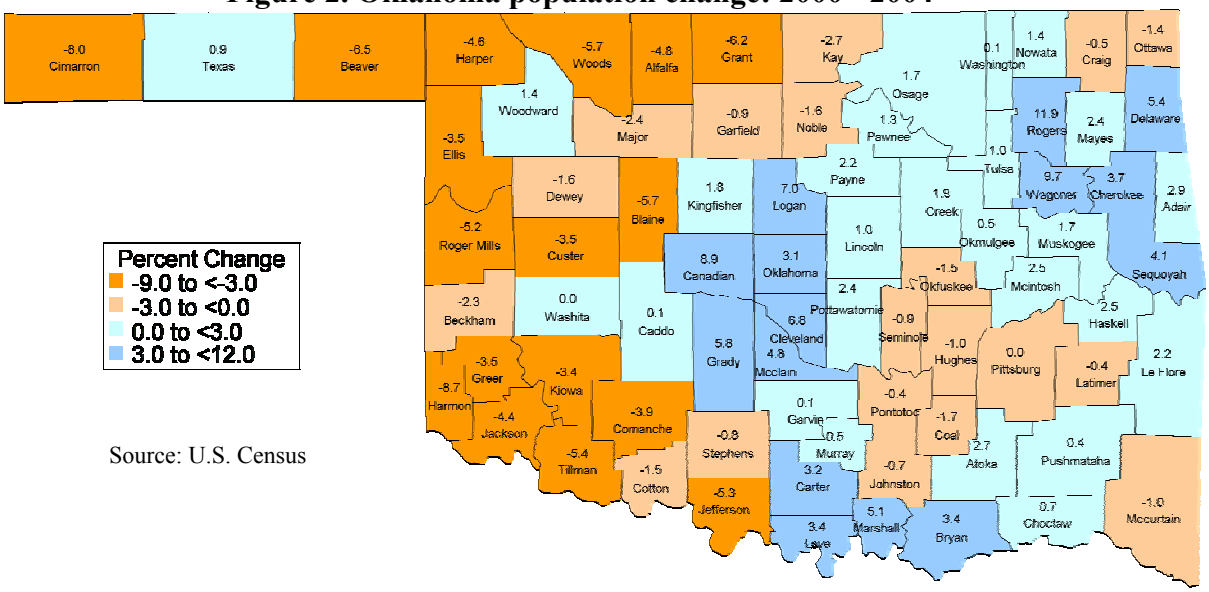
Table 1 (Cont'd). Annual estimates of the population for Oklahoma counties: April 1, 2000 – July1, 2004

	Population Estimates				U.S. Census	Percent Change	Percent Change
	July 2004	July 2003	July 2002	July 2001	April 2000	2000-2004	Rank
McClain	29,100	28,700	28,100	27,900	27,740	4.79	9
McCurtain	34,000	34,100	34,200	34,200	34,402	-1.03	51
Mclntosh	19,900	19,800	19,700	19,600	19,456	2.48	19
Major	7,400	7,400	7,500	7,500	7,545	-2.41	59
Marshall	13,900	13,700	13,600	13,300	13,184	5.13	8
Mayes	39,300	39,000	38,800	38,500	38,369	2.36	21
Murray	12,700	12,700	12,600	12,700	12,623	0.47	36
Muskogee	70,600	70,400	69,900	69,800	69,451	1.69	26
Noble	11,200	11,300	11,300	11,400	11,411	-1.56	55
Nowata	10,700	10,900	10,700	10,600	10,569	1.40	28
Okfuskee	11,600	11,700	11,600	11,700	11,814	-1.50	53
Oklahoma	680,800	677,600	671,600	664,800	660,448	3.08	15
Okmulgee	39,900	39,800	39,700	39,700	39,685	0.52	35
Osage	45,200	45,200	45,200	45,100	44,437	1.67	27
Ottawa	32,700	32,800	32,900	33,200	33,194	-1.38	52
Pawnee	16,800	16,900	16,800	16,900	16,612	1.34	30
Payne	69,700	69,700	69,000	69,200	68,190	2.18	23
Pittsburg	44,000	44,000	44,100	43,600	43,953	-0.01	42
Pontotoc	35,000	35,000	34,900	34,800	35,143	-0.39	43
Pottawatomie	67,100	66,800	66,800	66,300	65,521	2.43	20
Pushmataha	11,700	11,700	11,700	11,700	11,667	0.41	37
Roger Mills	3,300	3,200	3,200	3,300	3,436	-5.15	69
Rogers	79,000	77,300	75,300	73,300	70,641	11.89	1
Seminole	24,700	24,500	24,600	24,700	24,894	-0.86	48
Sequoyah	40,600	40,000	39,700	39,300	38,972	4.12	10
Stephens	42,800	42,600	42,600	42,800	43,182	-0.82	47
Texas	20,300	19,900	20,000	20,100	20,107	0.94	33
Tillman	8,800	8,900	8,900	9,300	9,287	-5.41	71
Tulsa	569,100	570,200	569,900	566,400	563,299	1.04	31
Wagoner	63,100	61,800	60,500	58,900	57,491	9.68	2
Washington	49,000	49,100	49,200	49,000	48,996	0.06	39
Washita	11,500	11,300	11,400	11,400	11,508	0.03	41
Woods	8,600	8,700	8,800	8,800	9,089	-5.71	72
Woodward	18,700	18,600	18,500	18,400	18,486	1.38	29

According to the U.S. Census data estimates for 2004, Oklahoma's population was counted at 3,523,553 and 28th in size among all states (Figure 1). Though the population grew by almost 73,000 since 2000, the 2.1 percent growth rate was slightly less than one-half that of the nation as a whole. Of the adjoining states, only Kansas grew at a slower rate than Oklahoma. Among the 77 counties in Oklahoma, the population continued to migrate from rural areas into the urban centers. The Oklahoma City and Tulsa metro-politan statistical areas captured 98 percent of the entire state's growth during the past four years. Thirty-five counties experienced a loss in population since 2000 (Table 1).

Other counties in the southern and eastern regions of the state had net growth, but the numerical population change for those counties was not large (Figure 2). Eighteen counties have populations below 10,000, and seven of those are below 5,000 in total population. Only six cities outside of the 2 metro areas have populations exceeding 25,000, and an additional 14 towns have populations between 10,000 and 24,999. As a result, many of the areas of the state are too small to sustain private health care providers and institutions.

Figure 2. Oklahoma population change: 2000 - 2004



The state's population is aging. From 2000 to 2004, the population of children and adolescents under the age of 18 dropped 3.6 percent from 892,360 to 859,870. The reduction would have been even greater if not for the increase in the population of 0-5 year olds that grew by almost 2.5 percent (Figure 3). There was a pronounced growth in the five-year age groups between 20 and 34, and the change was relatively consistent among males and females. Some of the overall age shift is due to aging baby boomers, but the actual loss of residents in the younger age group suggests other forces impacting the young population groups. It is expected that this shift will place even greater pressure upon the state to support health costs in the older age groups at the sacrifice of health care coverage for the young who are often considered healthy and self-supporting citizens.

There were a total of 965,850 children ages 0-19 in 2004, representing 27.4% of the state's population. The number of women ages 15-44 stood at 730,010, or 40.9% of the state's female population. The total size of the MCH age-targeted population including children ages 0 through 19 and females ages 20 through 44 stood at 1,572,444, or 44.6% of the total population. These percentages are slightly below those observed for the national averages and are expected due to the older median age for Oklahoma. Equivalent county level data are only available for year 2003.

Table 2. Oklahoma population of children and women of childbearing age: 2003

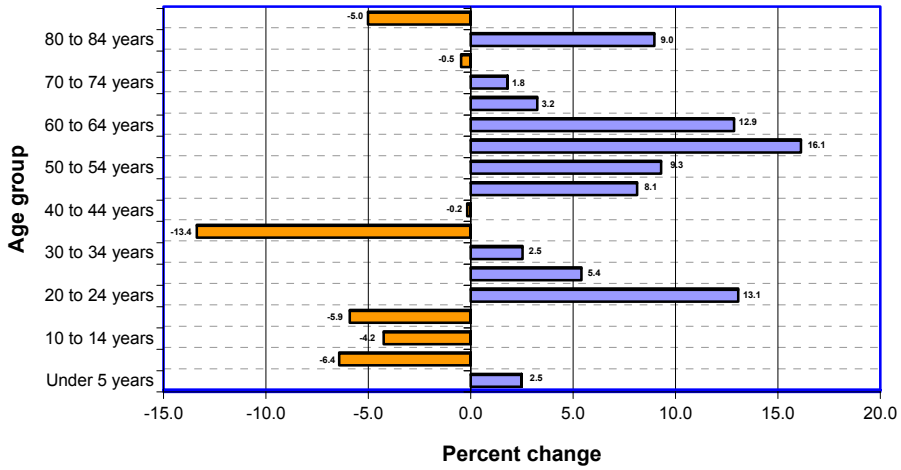
Source: U.S. Census

	Total Population	Children Under 5	Children Ages 5-13	Children Ages 14-17	Children Ages 18-24	Females Ages 15-44
State Total	3,511,532	244,139	433,596	200,508	382,078	729,796
Adair	21,614	1,775	3,171	1,453	2,214	4,436
Alfalfa	5,910	213	510	300	495	813
Atoka	14,142	829	1,588	770	1,417	2,467
Beaver	5,582	310	713	338	518	1,014
Beckham	19,894	1,326	2,169	1,085	2,161	3,598
Blaine	11,678	687	1,290	699	1,269	1,901
Bryan	37,306	2,473	4,355	2,101	4,407	7,656
Caddo	30,070	2,050	3,914	2,192	3,096	5,845
Canadian	92,904	5,763	11,948	6,177	9,687	19,970
Carter	46,396	3,143	5,740	2,768	4,180	8,983
Cherokee	43,783	3,047	5,339	2,579	6,493	9,923
Choctaw	15,431	1,114	1,886	911	1,439	2,987
Cimarron	2,961	177	386	194	247	490
Cleveland	219,966	13,088	25,165	12,057	30,824	52,289
Coal	5,946	378	793	354	535	1,096
Comanche	113,890	9,198	15,554	6,579	15,570	24,134
Cotton	6,582	404	825	372	606	1,239
Craig	14,880	960	1,678	844	1,367	2,743
Creek	68,794	4,502	8,910	4,346	6,582	13,562
Custer	24,962	1,674	2,661	1,362	4,124	5,695
Delaware	38,709	2,262	4,559	2,238	3,433	7,126
Dewey	4,549	223	464	263	433	779
Ellis	3,996	199	408	206	319	606
Garfield	57,105	4,011	6,845	3,155	5,499	11,229
Garvin	27,218	1,859	3,175	1,498	2,629	5,188
Grady	47,439	3,006	5,992	2,906	5,367	10,133
Grant	4,973	244	570	300	466	887
Greer	5,888	273	493	276	622	844
Harmon	3,053	204	336	204	314	561
Harper	3,398	176	326	210	288	577
Haskell	12,044	862	1482	687	1,165	2,271
Hughes	13,898	763	1,567	718	1,291	2,317
Jackson	27,338	2,187	3,956	1,677	2,868	5,721
Jefferson	6,535	393	746	348	583	1,179
Johnston	10,522	644	1,283	594	1220	2,038
Kay	47,260	3,225	5,946	2,773	4,665	8,961
Kingfisher	14,072	963	1,683	878	1,457	2,747
Kiowa	9,977	604	1,094	582	937	1,723
Latimer	10,575	669	1,276	584	1,403	2,156
Le Flore	48,896	3,584	6,077	2,841	5,276	9,562

Table 2 (Cont'd). Oklahoma population of children and women of childbearing age: 2003

	Total Population	Children Under 5	Children Ages 5-13	Children Ages 14-17	Children Ages 18-24	Females Ages 15-44
Lincoln	32,262	2,070	4,119	2,095	3,140	6,298
Logan	35,420	2,059	4,096	2,136	5,257	7,911
Love	8,905	520	1,082	522	822	1,637
McClain	28,595	1,791	3,554	1,773	2,849	5,879
McCurtain	34,006	2,454	4,656	2,119	3,207	6,704
McIntosh	19,735	1,106	2,161	1,091	1,687	3,483
Major	7,422	380	816	450	646	1,285
Marshall	13,652	883	1,527	714	1,285	2,421
Mayes	38,870	2,526	4,929	2,475	3,760	7,563
Murray	12,718	808	1,447	646	1,263	2,430
Muskogee	70,255	4,903	8,834	3,922	7,341	14,162
Noble	11,251	723	1,353	671	1,019	2,141
Nowata	10,836	641	1,394	648	1,050	2,059
Okfuskee	11,679	679	1,346	668	1,192	2,113
Oklahoma	676,066	52,888	83,826	36,033	70,130	146,432
Okmulgee	39,681	2,624	5,207	2,456	4,308	7,764
Osage	45,249	2,593	5,498	2,915	4,334	8,417
Ottawa	32,761	2,153	4,063	1,921	3,522	6,221
Pawnee	16,789	984	2,137	1,077	1,547	3,225
Payne	71,059	4,048	6,294	2,811	15,864	18,413
Pittsburg	44,168	2,502	4,920	2,457	4,169	7,825
Pontotoc	35,174	2,360	4,111	1,963	4,474	7,307
Pottawatomie	67,348	4,636	8,272	3,900	8,169	14,606
Pushmataha	11,750	691	1,441	751	1,061	2,199
Roger Mills	3,201	189	323	155	296	510
Rogers	77,193	4,700	10,530	5,135	7,932	16,457
Seminole	24,489	1,759	3,047	1,491	2,594	4,716
Sequoyah	39,979	2,652	5,386	2,494	3,808	8,083
Stephens	42,474	2,567	4,976	2,404	3,947	7,946
Texas	19,935	1,760	2,628	1,133	2,387	4,198
Tillman	8,835	547	1,057	647	794	1,580
Tulsa	570,313	44,387	73,421	31,418	55,307	120,946
Wagoner	61,827	3,948	8,289	3,850	6,247	12,957
Washington	49,121	2,894	5,811	2,926	4,707	9,166
Washita	11,247	633	1,325	720	1,090	2,134
Woods	8,670	410	729	424	1,434	1,634
Woodward	18,461	1,209	2,118	1,078	1,973	3,528

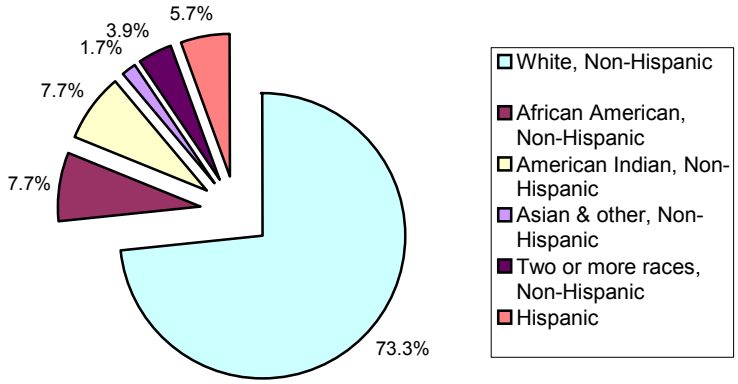
Figure 3. Percent change of Oklahoma's population, by age group: 2003
Source: U.S. Census



Race and Ethnicity:

The 2000 Census changed race enumeration by allowing individuals to select multiple races instead of primary race as in previous census counts. Slightly less than three-fourths (73.3%) of the population was identified as White only for the 2003 annual Census population estimate. The largest minority in the state remains American Indian/Native American, with 7.7% identifying themselves in that racial category alone, and African Americans reporting only one race also represented 7.7% of the population (Figure 4). The growth of the Hispanic population in Oklahoma over the past ten years has been significant, representing over 5.7% of the state's populace with the 2003 population estimate.

Figure 4. Oklahoma population distribution, by race and ethnicity: 2003
Source: U.S. Census

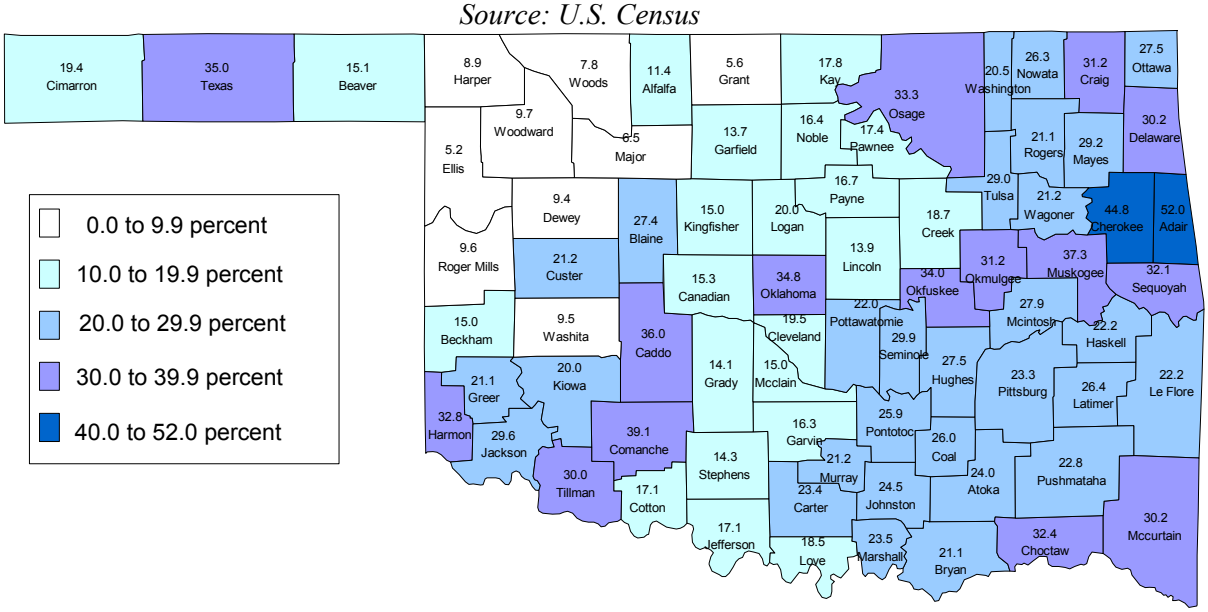


Assessing trends among other minority populations is more difficult due to the multi-race coding implemented in 2000. When comparing race either alone or in combination, 11.4% of the population included Native American as a race in the 2000 Census. This percentage is much more consistent with the two previous national decennial census reports. Not surprisingly, the majority of individuals reporting two or more races were Native American plus some other race.

Though Oklahoma is considered a reservation state federally (state boundary is the reservation boundary), the individual 39 tribes do not live in defined areas across the state. The subsequent blending of Native American cultures makes it difficult to assess needs. Also, tribes are typically combined as one group when attempting to describe needs; these same methods are used when portraying Caucasian, African American, and Asian groups. This aggregation fails to adequately explain customs and influences unique to very different cultures among tribes and races.

Figure 5. Percent of population that is non-White and/or Hispanic: 2004

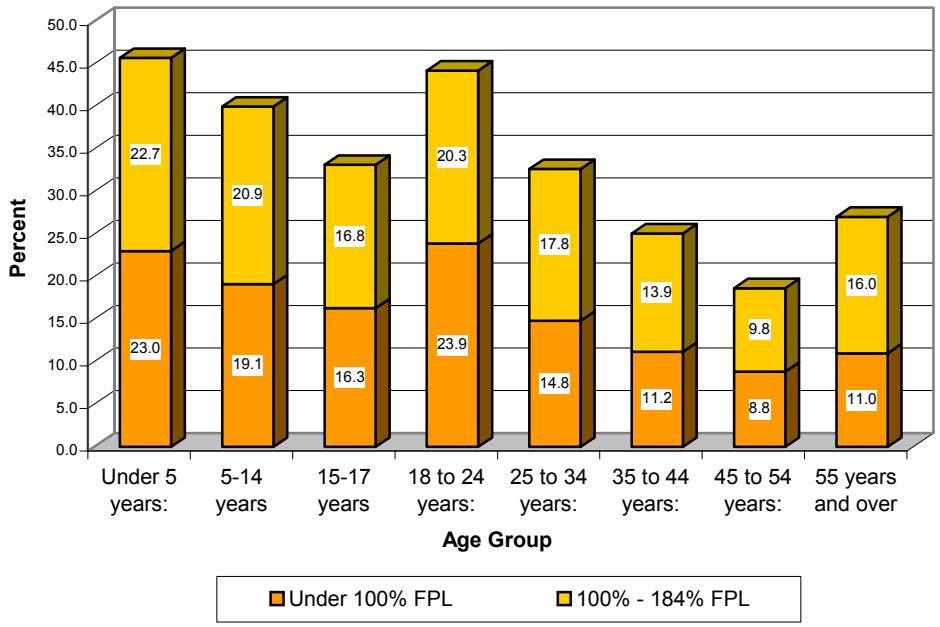
Source: U.S. Census



Income, Poverty and Insurance:

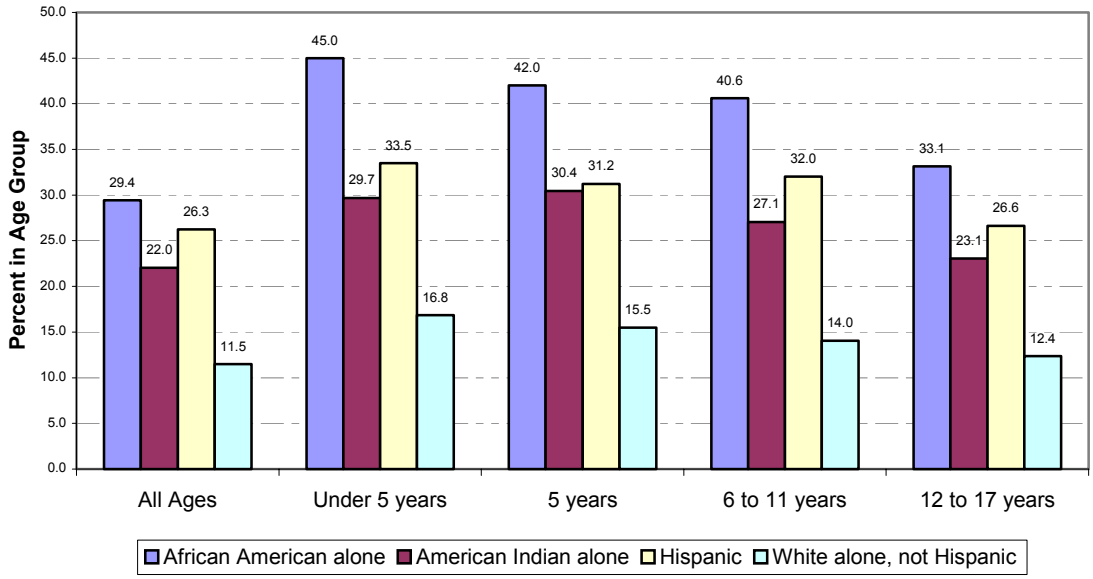
Oklahoma is a poor state. Even with petroleum-related revenues, the associated income is limited to a few people. The 2003 per capita personal income for the state was $26,719, with only eleven other states reporting lower per capita incomes. The $26,719 represented only 85 percent of the national value; however, this is an improvement over the 81 percent comparison to the 2000 national per capita income. Among the counties, the per capita income ranged from $16,777 in Coal County to $35,470 in Tulsa County. With few exceptions, rural counties reported much lower incomes than did counties in or near the metropolitan centers. The 2003 state non-metropolitan per capita income was $22,443 compared to $29,221 for the metropolitan areas combined.

Figure 6. Oklahomans below 185% of the Federal Poverty Level, by age group: 1999
Source: U.S. 2000 Census



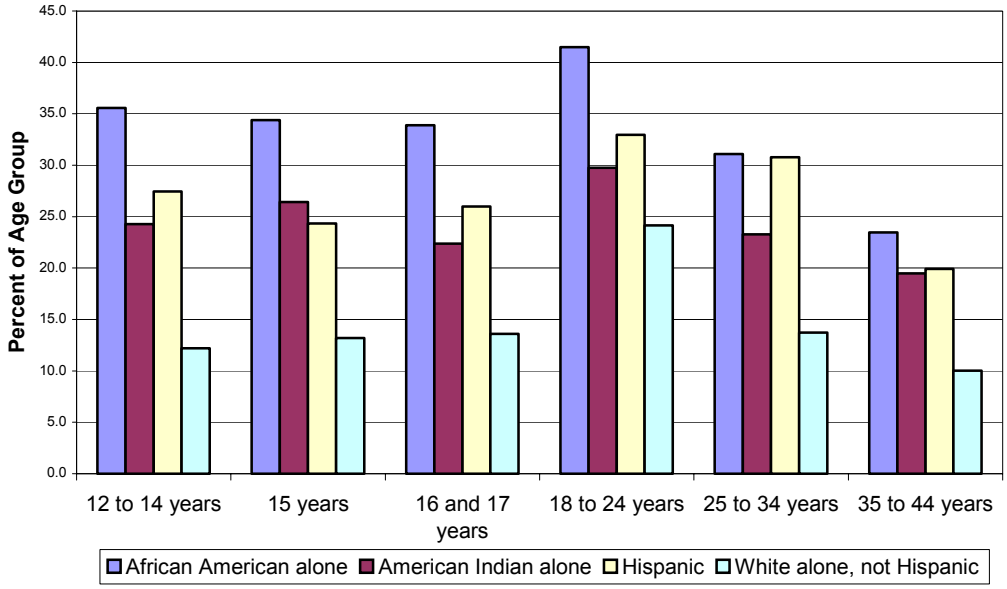
Poverty is not uniformly distributed among age groups or racial and ethnic groups. Among Oklahoma children, the younger you are, the more likely you will live in poverty (Figure 6). Add race to the comparison, and the likelihood of being poor increases greatly. Almost one-half (45%) of African American children under the age of five are living in poverty in Oklahoma. This rate is 2.6 times that of the White, non-Hispanic children of the same age group. While Hispanic and Native American children fare better, they are also nearly twice as likely to live in poverty as are White children if they live in Oklahoma (Figure 7).

Figure 7. Percent of Oklahoma children below the Federal Poverty Level, by race/ethnicity and age group: 1999
Source: U.S. Census



Among childbearing age women, poverty is again not uniformly distributed by race/ethnicity or by age (Figure 8). Women most likely to be in poverty are in the 18-24 year old age group. Two contributors to this high rate could be the establishment of new households apart from their parents as well as being in school and not able to hold a full-time job.

Figure 8. Percent of Oklahoma childbearing age women below the Federal Poverty Level: 1999
Source: U.S. Census

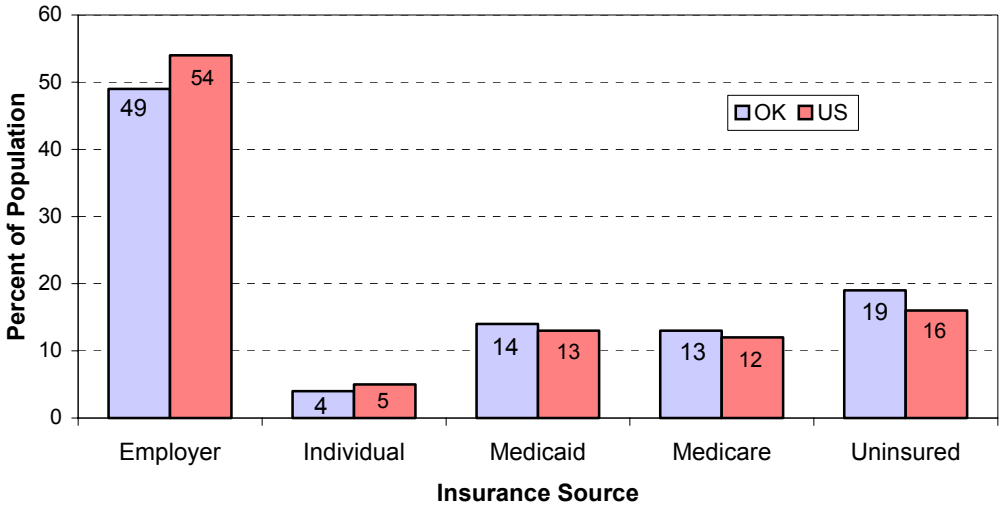


The unemployment rate for the state stood at 4.5% in April 2005. For the year 2004, the overall rate was a relatively low 4.8% compared to the national rate of 5.5 %. Oklahoma's 2004 average rate of 4.8% was also lower than all adjoining states.

However, even with relatively low unemployment, the state suffers from high rates of uninsured persons. The state has attempted to diversify economically since the recession of the early 1980s, but much of the job growth has been in volatile businesses that rely on low-wage and temporary positions, such as call centers and livestock processing. In addition, farming is still a large industry. While total income from farm crops is significant, net income is low due to the high cost of fuel and other related farming expenses. Disposable income is small and therefore many farm families cannot afford the high cost of insurance premiums. These are likely major contributors to why Oklahoma has such a high rate of uninsured persons.

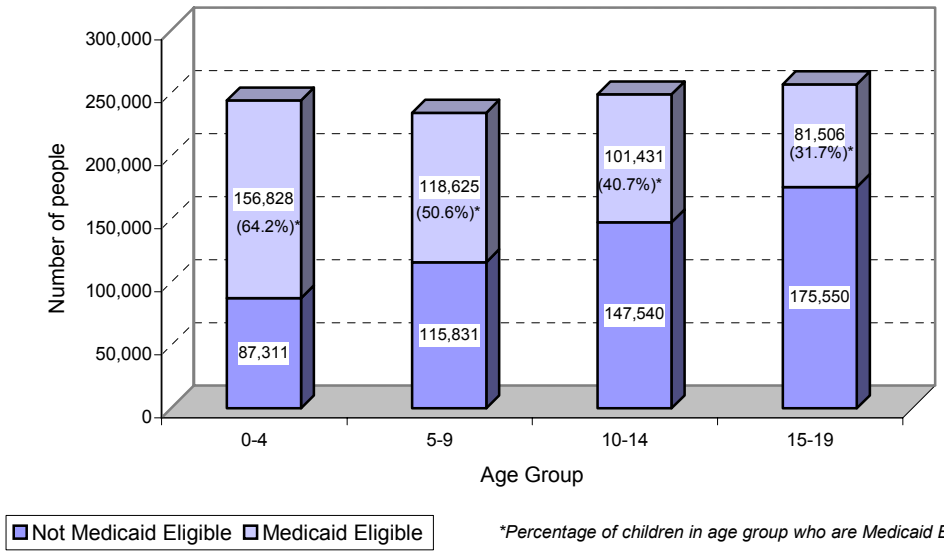
According to the Kaiser Family Foundation, 19% of Oklahomans were uninsured in the 2002-2003 period; this compares to 16% for the national rate for 2003. Only four percent of Oklahomans purchased their insurance directly (Figure 9). Fifteen percent of children ages 18 and under were uninsured, compared to 12% nationally. However, the National Survey of Children's Health, 2003 reported that 20.4% of children under the age of 18 were either currently uninsured or not insured for some period during the past year of the report. Among working age adults, 25% of Oklahomans were uninsured, compared to 20% for the U.S. What is more difficult to assess is the coverage of the insurance policies; many policies have exclusions, deductibles, and co-pay charges that inhibit people from getting care even if they have insurance.

Figure 9. Population distribution by insurance status
Oklahoma 2002-2003 and U.S. 2003
Source: Kaiser Family Foundation



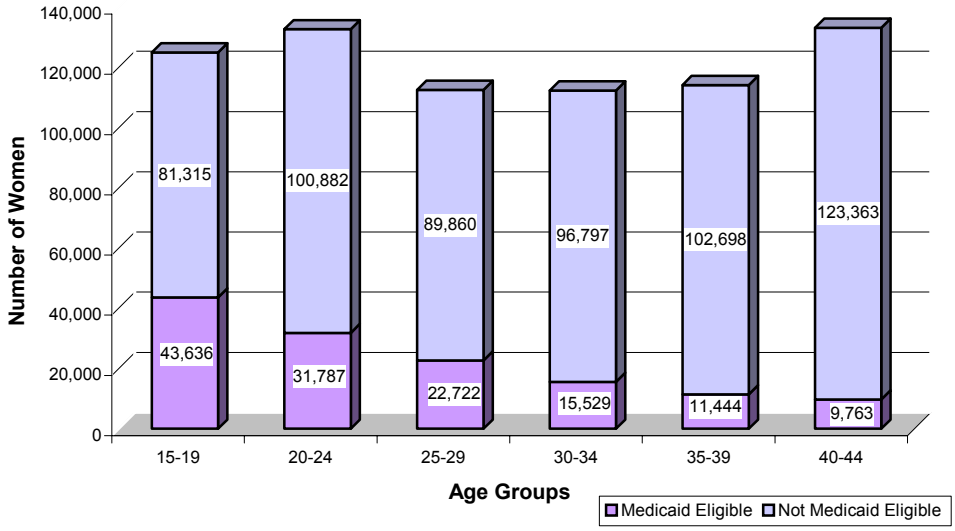
Data provided by the Oklahoma Health Care Authority for 2004 show that 458,390 children and adolescents ages 0-19 were enrolled (eligible) for Medicaid services (Figure 10). This represents 46.6% of all individuals ages 0-19 in the state. It does not include those individuals who are potentially eligible but have not been certified to receive assistance. Children up to age 18 qualify for Medicaid with family incomes up to 185% of the Federal Poverty Level (FPL). Children ages 18-20 qualify with incomes up to 100% of the FPL. Oklahoma has utilized the State Children's Health Insurance Program (SCHIP) to expand Medicaid eligibility up to 185% for all age groups up to age 18.

Figure 10. Number of Oklahoma children, by Medicaid eligibility status, by age group: 2004
Source: Oklahoma Health Care Authority



Among women of childbearing ages, 134,881 were certified eligible to receive Medicaid-reimbursed medical care in 2004 (Figure 11). This represents 18.5% of the estimated 729,796 women ages 15-44. Medicaid eligibility requires a non-pregnant woman to be roughly at 57% of the (FPL) in order to qualify for Medicaid eligibility. Pregnant women qualify at 185% of the FPL. However, undocumented (foreign-born) women are ineligible irrespective of income. As a result, this group of mothers represents a major portion of the uncompensated prenatal and delivery care provided in Oklahoma.

Figure 11. Number of Oklahoma women, by Medicaid eligibility status, by age group: 2004
Source: Oklahoma Health Care Authority



Assessment of Maternal and Infant Health

General Birth Characteristics:

The number of births in Oklahoma has increased by eleven percent over a ten-year period, from 45,604 births in 1994 to 50,874 births in 2003. Teen births overall have seen a significant decrease from 1994 to 2003 with the greatest change in teens age 10-14 (36.7%), followed closely by the 15-17 age group (25%). In contrast, the number of births to adult women age 20 and over has increased significantly in all age groups, especially in the 40-44 age group with a 43.5% increase from 501 births in 1994 to 719 births in 2003.

From 1994-2003, 93% of Hispanic mothers reported their race as White. Although the births to White mothers show growth during this ten-year period, the majority of the 11.2% increase is attributed to mothers of Hispanic origin. The number of births to Hispanic mothers has increased 154% from 2,249 births in 1994 to 5,720 births in 2003. Conversely, births to White, non-Hispanic mothers have only increased 2.3% over the same ten-year period. All races, except African American/Blacks, have seen an increase in births from 1994 to 2003. Births to African American mothers decreased 3.4%, while births to Native American/American Indian mothers increased 21.5% and births among mothers identified as "Other" race increased 52.5% (Table 3).

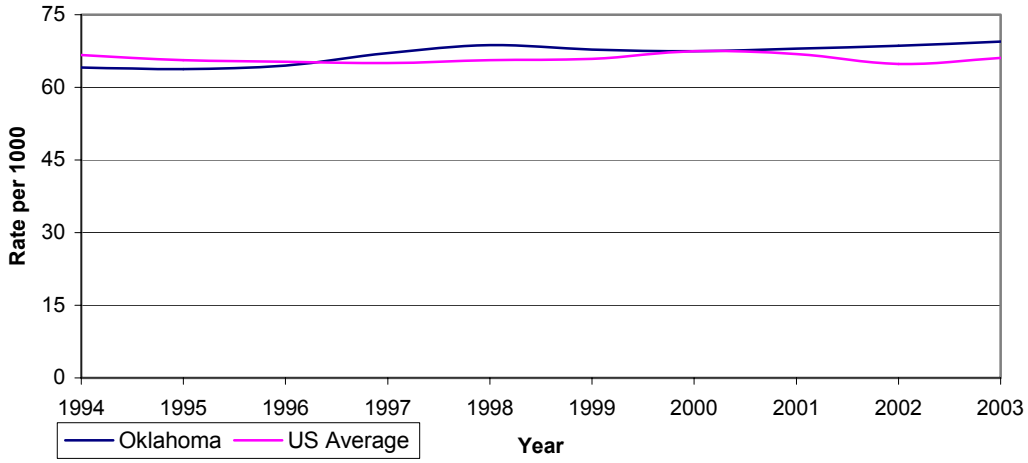
Table 3. Total number of births, by age and race/ethnicity of mother: Oklahoma 1994 to 2003

Characteristic of Mother	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Percent Change
Oklahoma	45604	45365	46133	48162	49354	48470	49712	50029	50310	50874	11.6
Age Group											
10-14	150	158	145	139	120	131	120	105	113	95	-36.7
15-17	2823	2763	2758	2819	2704	2514	2492	2322	2216	2118	-25.0
18-19	4782	4785	4939	5146	5174	5169	5219	5145	5086	4855	1.5
20-24	14870	14604	14367	15204	15771	15540	16065	16652	17038	17191	15.6
25-29	11835	11752	12544	13051	13566	13195	13471	13251	13324	13711	15.9
30-34	7682	7792	7557	7741	7816	7766	8182	8563	8487	8865	15.4
35-39	2850	2912	3148	3227	3415	3394	3464	3246	3301	3276	14.9
40-44	501	500	527	621	621	622	651	700	707	719	43.5
45+	14	16	29	23	28	28	26	25	31	33	135.7
Race/Ethnicity											
White	35656	35694	36435	37758	38464	37669	38512	38996	39245	39656	11.2
African Am.	4751	4469	4465	4712	4788	4598	4777	4606	4693	4589	-3.4
Native Am.	4361	4298	4285	4627	4846	4791	5206	5265	5156	5297	21.5
Other	764	810	784	885	886	858	1013	1080	1114	1165	52.5
Hispanic	2249	2356	2867	3207	3615	3910	4352	4937	5251	5720	154.3
White, Hispanic	2131	2247	2729	3032	3200	3337	4056	4705	4968	5368	151.9
Wh., Non-Hispanic	33525	33447	33706	34726	35264	34332	34456	34291	34277	34288	2.3

Fertility:

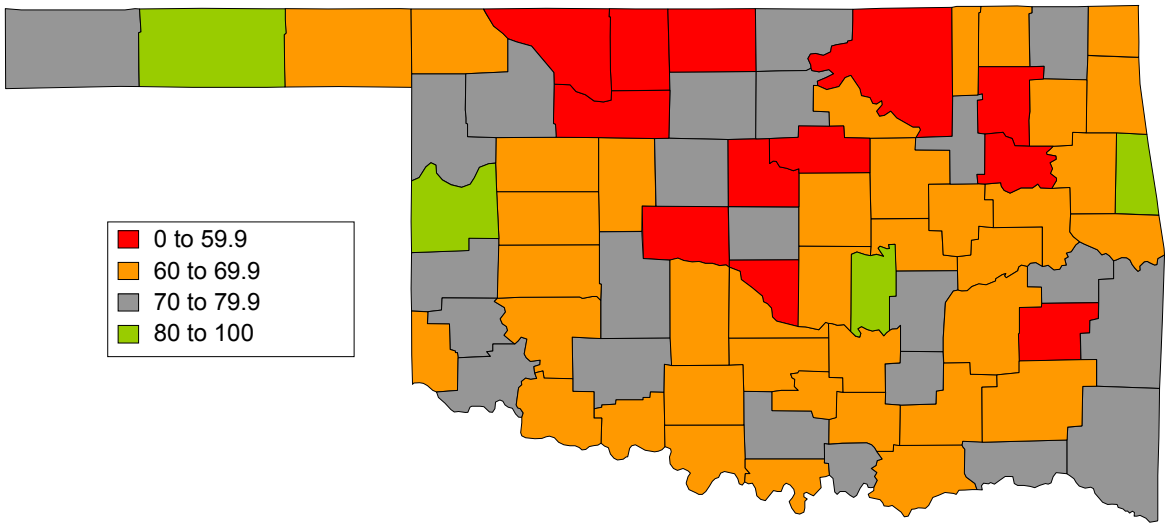
Fertility rates are defined as a ratio of all births to the female population aged 15-44. Oklahoma fertility rates have seen a gradual increase over a ten-year period, 1994-2003, from 65 births per 1000 females in 1994 to 70 births per 1000 females in 2003 (Figure 12).

Figure 12. Fertility rate: Oklahoma 1994-2003
(births per 1,000 females ages 15-44)
Source: Oklahoma Vital Statistics



For Oklahoma, the average fertility rate for 2001 through 2003 was 68.7. Only one county (Texas 90.4) had a rate of 90 or higher per 1,000 women age 15-44. Three counties had rates of 80 or higher per 1,000 women age 15-44 (Adair 83.7, Roger Mills 81.7, Seminole 80.6). Four counties had fertility rates less than 50 per 1,000 (Cleveland 49.4, Alfalfa 49.2, Grant 46.4, Payne 45.9) (Figure 13).

Figure 13. Fertility rates per 1,000 women ages 15-44, by county: Oklahoma 2001-2003
Sources: Oklahoma Vital Statistics and U.S. Census

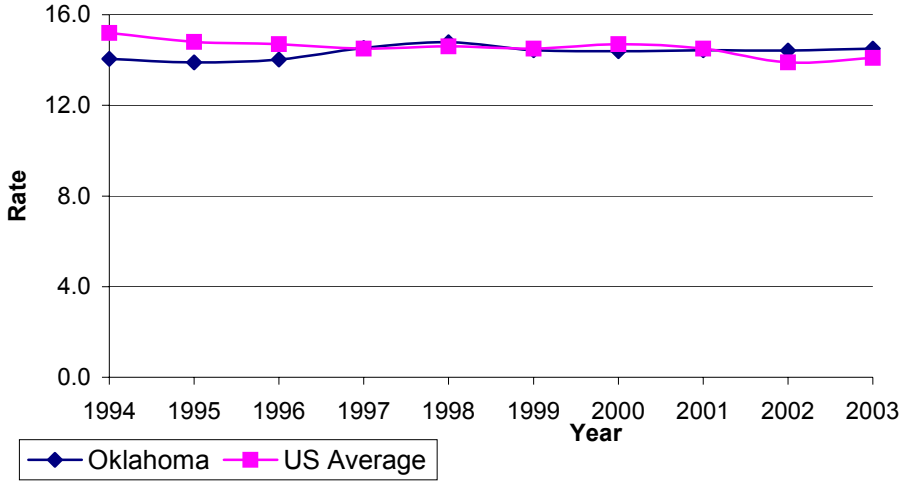


Crude Birth Rate:

The crude birth rate refers to the number of births per 1,000 population. Unlike a fertility rate, the crude birth uses the entire population, including men, women, and children, as the denominator. Trends in birth rates for Oklahoma have shown a gradual increase from 14.0 births per 1,000 people in 1994 to 14.5 births per 1,000 people in 2003, a 3.6% difference. Conversely, the national birth rate has been gradually declining from 15.2 births per 1,000 people in 1993 to 14.1 births per 1,000 people in 2003, a 7.8% difference (Figure 14).

Figure 14. Births per 1,000 population: Oklahoma 1994-2003

Source: Oklahoma Vital Statistics



Maternal Characteristics:

Table 4 shows the number of Oklahoma's 2003 live births by age within racial and ethnic groups. African Americans, Native Americans, and Hispanics have the highest percentage of births in each of the two youngest age groups: Ages "14 and under" and "15-19". Over 20% of births for African Americans and Native Americans are to mothers 19 years old and younger, compared to only 11.8% of White mothers. As will be demonstrated throughout this needs assessment, race, ethnicity, behaviors, and age are important factors in assessing adverse pregnancy outcomes.

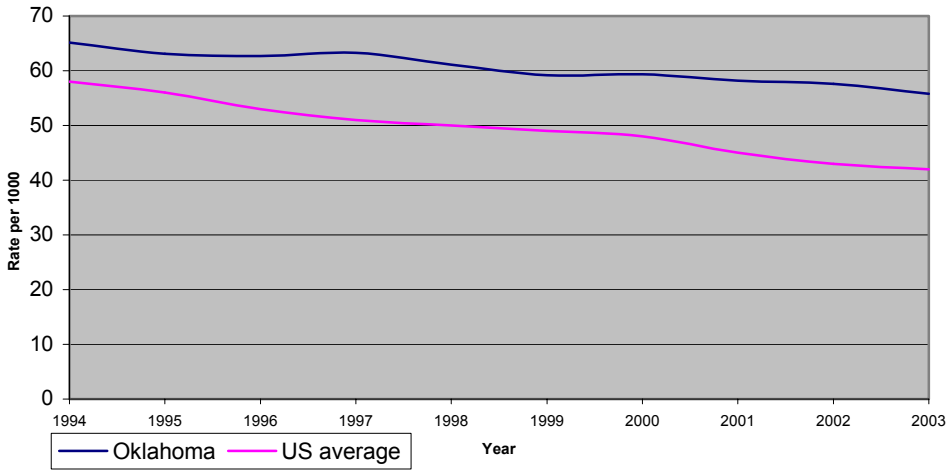
Table 4. Percent of births, by race and ethnicity within age groups: Oklahoma 2003

	Total	14 and Under		15-19		20-24		25-29		30-34		35+	
Total	50874	106	(0.2%)	6973	(13.7%)	17191	(33.8%)	13711	(26.9%)	8865	(17.4%)	4028	(7.9%)
White, Non-Hispanic	34288	41	(0.1%)	4029	(11.7%)	11228	(32.8%)	9616	(28.0%)	6457	(18.8%)	2917	(8.5%)
Af. Am., Non-Hispanic	4545	21	(0.5%)	904	(19.9%)	1749	(38.5%)	1031	(22.7%)	565	(12.4%)	275	(6.1%)
Nat. Am., Non-Hispanic	5199	22	(.04%)	1032	(19.9%)	1997	(38.4%)	1270	(24.4%)	627	(12.1%)	251	(4.8%)
Asian	1064	0	(0.0%)	43	(4.0%)	212	(19.9%)	305	(28.7%)	335	(31.5%)	169	(15.9%)
Hispanic*	5720	21	(0.4%)	957	(16.7%)	1989	(34.8%)	1474	(25.8%)	870	(15.2%)	409	(7.2%)

*Excludes 58 mothers whose race and ethnic origin were not stated.

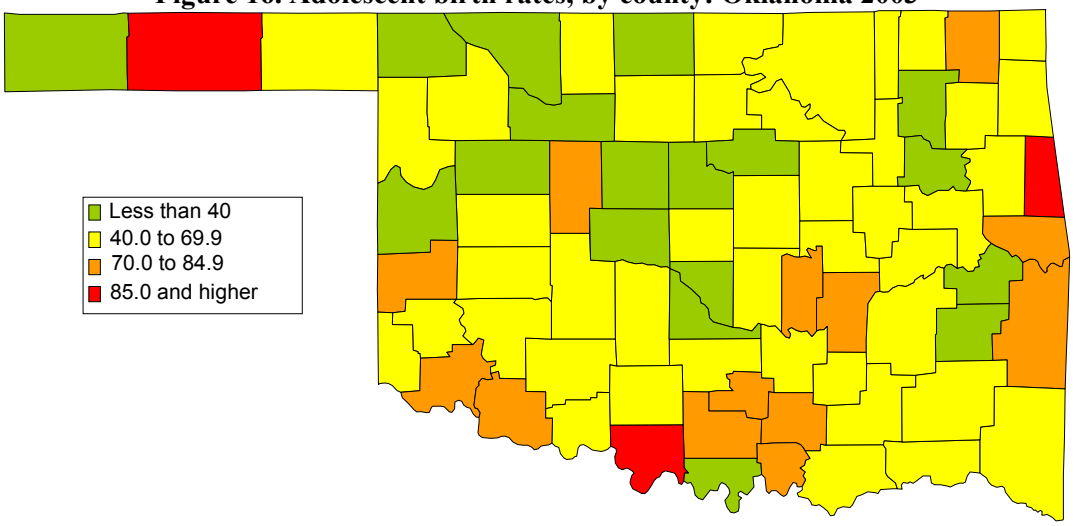
The adolescent birth rate in Oklahoma has steadily declined from 1993 at 66 births per 1000 females to 2003 at 56 births per 1000 females ages 15-19, a 15.2% difference. However, Oklahoma's adolescent birth rate of 56 births is still 33.3% higher than the national rate of 42 births per 1,000 females, ages 15-19. Approximately 14% of all births in Oklahoma are born to teen mothers aged 15 to 19. The 2003 birth rate for teens aged 15-17 was 27.4 per 1,000 females in same age group.

Figure 15. Births per 1,000 females ages 15-19: Oklahoma 1994-2003



For Oklahoma's two largest counties, the birth rate per 1,000 females aged 15-19 was 68.7 and 58.5 for Oklahoma and Tulsa counties respectively (Figure 16). Only three counties were above 85 births per 1,000 females (Adair, Jefferson, and Texas), the highest of which was Adair County with 101.8 teen births per 1,000 females.

Figure 16. Adolescent birth rates, by county: Oklahoma 2003



Low Birth Weight:

Babies born weighing 5.5 pounds or less (<2500 grams) are considered low birth weight (LBW) babies. Low birth weight babies are at a higher risk than normal weight babies for experiencing health and developmental problems. They are born either pre-term (less than 37 completed weeks of gestation) or small for gestational age (SGA - less than 10th percentile for gestational age) or both. Some risk factors for low birth weight are lack of appropriate prenatal care, limited access to prenatal care, race, ethnicity, smoking, and age. From 1994 to 2003, all race groups have seen an increase in the percentage of low birth weight deliveries. Only mothers of Hispanic ethnicity have seen a decline in their low birth weight rates, going from 6.7% in 1994 to 5.9% in 2003, (a 12 percent decrease). This is not unexpected, because studies have confirmed that Hispanic immigrant women have higher weight and healthier babies than do their U.S-born counterparts. These immigrant Hispanic mothers tend to develop the same risk patterns as the U.S.-born Hispanic mothers along with corresponding poorer outcomes as they become acculturated to U.S. diet, exercise, and other customs.

In 2003, African Americans were almost twice (1.8 times) as likely as Whites to have a low birth weight baby (13.6% vs. 7.5%). Although African American mothers have the highest percentage of low birth weight births, births to White mothers have seen the greatest increase during the ten-year period increasing from 6.5% in 1994 to 7.5% in 2003, (a 15.4 percent increase). The percentage of LBW births has increased 10.5% among Native Americans and 12.4% among African Americans for the same time period (Table 5). Improvements in medical care have increased the survivability of very low weight babies that would previously have been fetal losses, but it is difficult to assess this

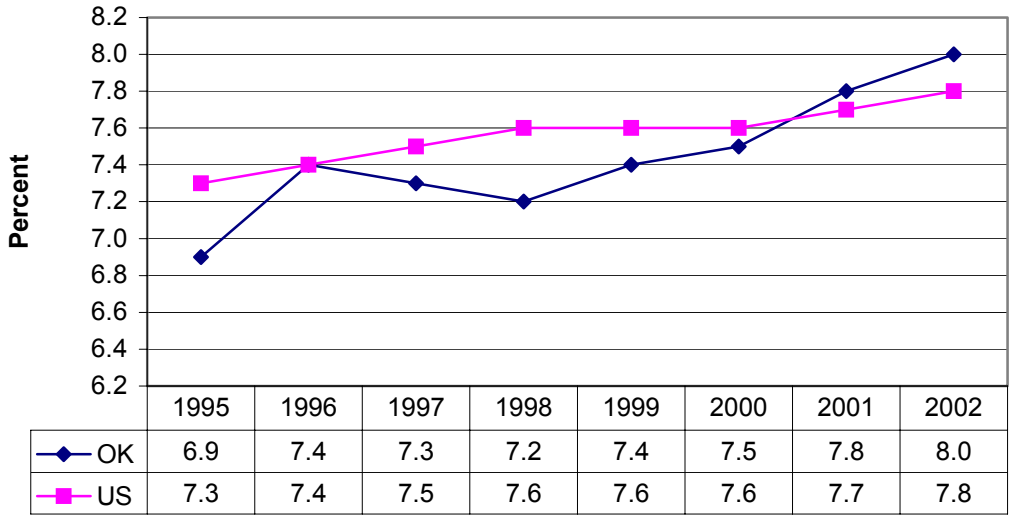
overall contribution to low weight live births. In addition, assistive reproductive technology increases the likelihood of multiple, low weight births.

Table 5. Low birth weight births, by race and ethnicity
Oklahoma 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
LBW, White, Non-Hispanic										
LBW #	2,191	2,124	2,304	2,376	2,351	2,449	2,422	2,546	2,588	2,561
LBW %	6.5	6.4	6.8	6.8	6.7	7.1	7.0	7.4	7.6	7.5
LBW, African Am., Non-Hispanic										
LBW #	573	554	576	573	591	540	626	627	652	620
LBW %	12.1	12.5	13.0	12.3	12.4	11.8	13.2	13.7	14.0	13.6
LBW, Native Am., Non-Hispanic										
LBW #	244	261	243	280	302	284	315	347	332	327
LBW %	5.7	6.1	5.7	6.1	6.3	6.0	6.2	6.7	6.6	6.3
LBW, Hispanic										
LBW #	150	140	185	181	215	231	276	292	367	335
LBW %	6.7	5.9	6.5	5.6	6.0	5.9	6.3	5.9	7.0	5.9

*LBW= birth weight less than 2500 grams.

Figure 17. Percent of live births weighing less than 2500 grams:
Oklahoma and United States 1995 - 2002

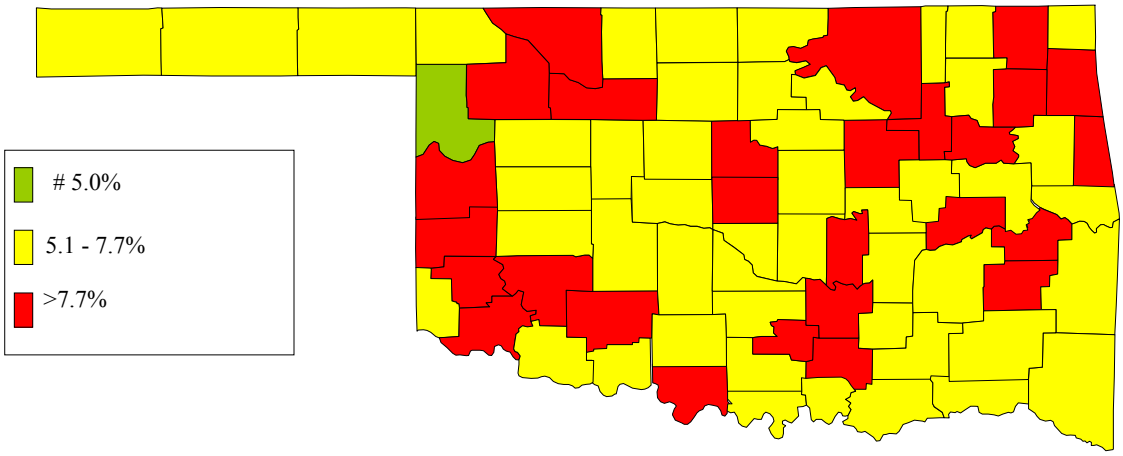


	1995	1996	1997	1998	1999	2000	2001	2002
OK	6.9	7.4	7.3	7.2	7.4	7.5	7.8	8.0
US	7.3	7.4	7.5	7.6	7.6	7.6	7.7	7.8

Due to small cell size, data from 1999 to 2003 were used to calculate an average low birth weight percentage for each county. The ranges are based on the Healthy People 2010 goal and the national average, 5.0% and 7.7%, respectively. The statewide average

for this timeframe was 7.7%, the same as the national average. Only one county met the Healthy People 2010 goal of 5.0%, which was Ellis County at 4.6%. The majority (49 out of 77 counties) was at or below the national average of 7.7%, while 27 counties, including the two greater metropolitan areas of Oklahoma City and Tulsa, were higher than the national average (Figure 18).

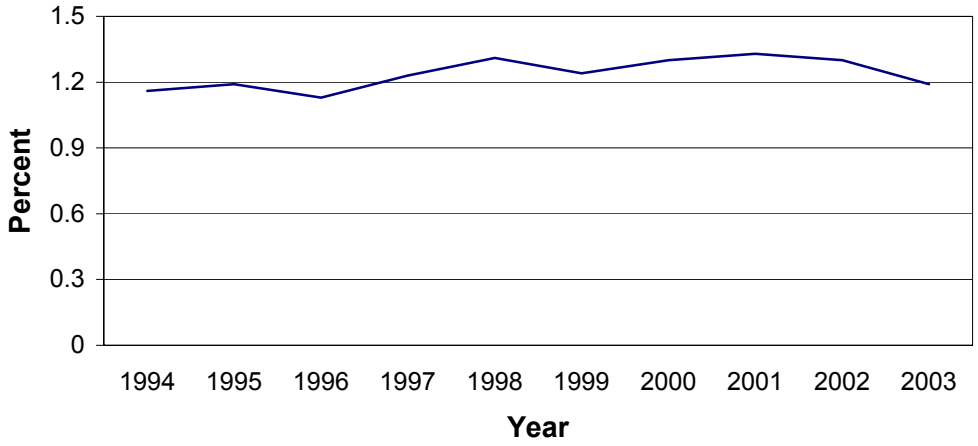
Figure 18. Percent of low birth weight births, by county: Oklahoma 1999 – 2003 averaged annual percent



Very Low Birth Weight:

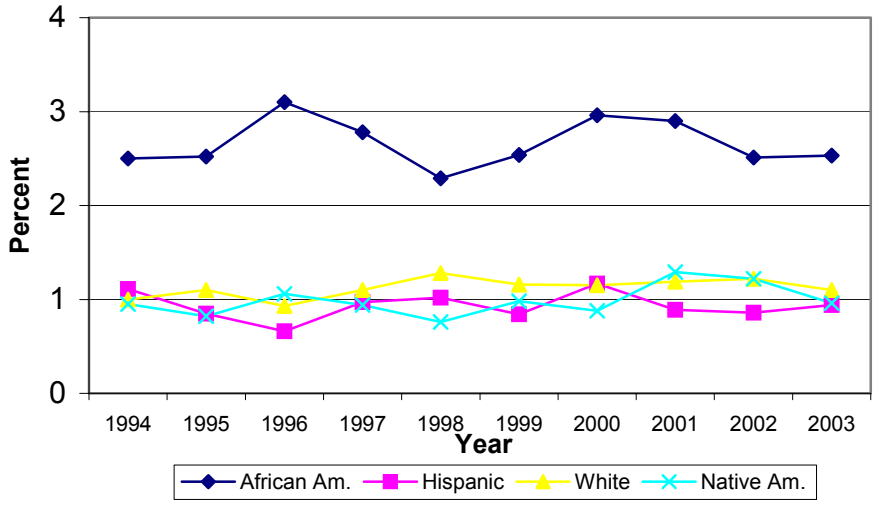
Although the percentage of very low birth weight infants, less than 1500 grams, has decreased in the last few years, there has been very little change over the ten-year period, 2003 (Figure 19).

Figure 19. Percent of very low weight infants among live births: Oklahoma 1994-2003



Racial disparities in the percentages of very low weight infants continue to exist. In 2003, African American mothers were more than twice as likely (2.3 times) to have a very low birth weight infant than White and Native American mothers as well as mothers of Hispanic origin (Figure 20).

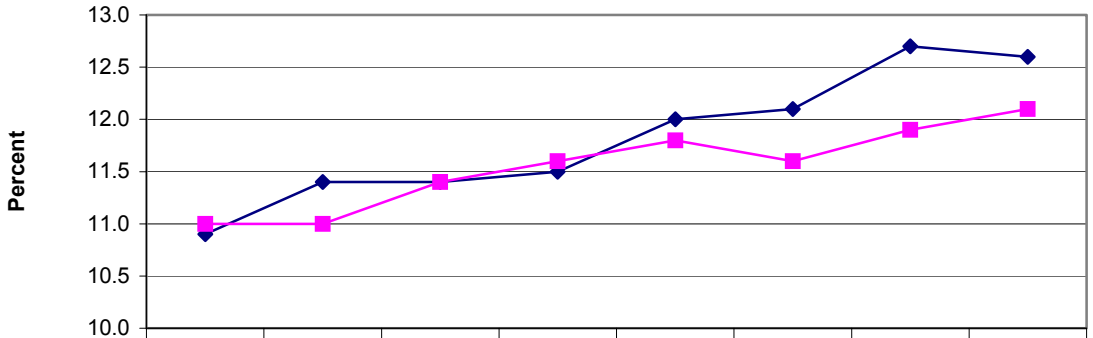
Figure 20. Percent of very low birth weight infants, by race/ethnicity: Oklahoma 1994-2004



Pre-term Births:

A pre-term birth is defined as any live birth with a gestational age of less than 37 completed weeks. An important perinatal health problem, pre-term births are a determinant of neonatal and infant morbidity, including respiratory problems, neurodevelopment deficiency, and infections. One in ten births in Oklahoma are delivered pre-term (Figure 21).

Figure 21. Percent of live births born preterm (less than 37 weeks gestation): Oklahoma and U.S. 1995-2002



	1995	1996	1997	1998	1999	2000	2001	2002
OK	10.9	11.4	11.4	11.5	12.0	12.1	12.7	12.6
US	11.0	11.0	11.4	11.6	11.8	11.6	11.9	12.1

Maternal Mortality:

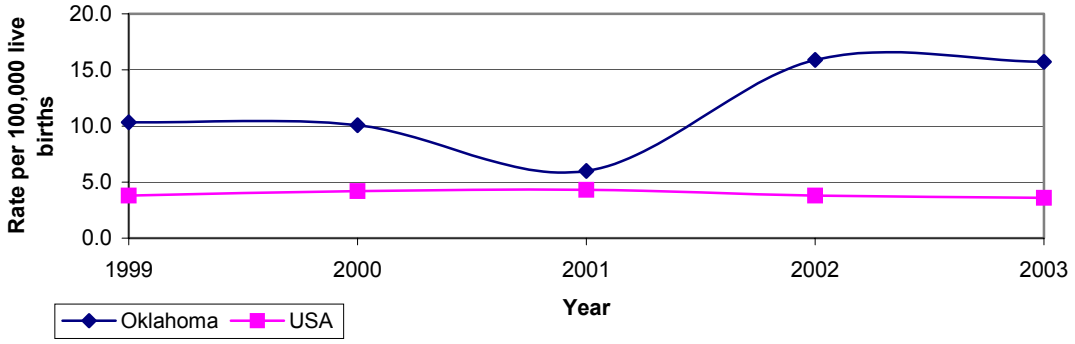
Maternal mortality can occur when a woman experiences sudden and unexpected complications during pregnancy, childbirth, and just after delivery. Maternal mortality rates are expressed as the number of maternal deaths per 100,000 live births. Oklahoma has consistently been above the national average in this category, and has more recently seen a very marked increase in maternal mortality rates in 2002 and 2003 (Figure 21). The majority of these deaths was in the category of "complications predominately related to the puerperium" which can include puerperal sepsis, tubal and ectopic pregnancy, obstetric embolism, complications of anesthesia, infections of the breast associated with childbirth, and other disorders of breast, and lactation associated with childbirth. From 1994-2003, the majority of maternal deaths were coded as "Other Obstetric Conditions, not elsewhere classified", giving minimal insight into the exact cause (Table 6).

Table 6. Causes of maternal deaths: Oklahoma 1999-2003

	All Races	White	African Am.	Other
All Causes	29	17	7	5
Pregnancy with Abortive Outcome (ectopic pregnancy)	1	1	0	0
Hypertensive Disorders in pregnancy, childbirth, and the puerperium	2	2	0	0
Other Maternal Disorders predominantly related to pregnancy	5	2	3	0
Maternal Care related to the fetus and amniotic cavity	2	1	1	0
Complications of Labour and Delivery	2	1	0	1
Delivery (single spontaneous delivery, single by caesarean section, etc.)	0	0	0	0
Complications predominantly related to the puerperium	7	5	1	1
Other Obstetric Conditions, not elsewhere classified	10	5	2	3

Note: Due to the small number of events in this category, one should proceed with caution when interpreting the aforementioned table and the following rates. In addition, since some maternal deaths due to pregnancy complications may not occur until several months after delivery, the potential for miscoding the actual cause of death could mask the true burden of maternal mortality.

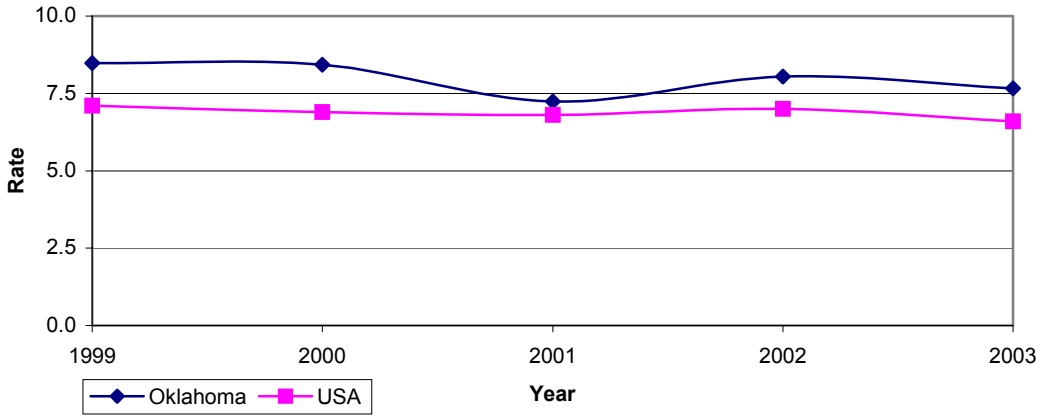
Figure 21. Five-year maternal mortality trend: Oklahoma 1999-2993



Infant Mortality:

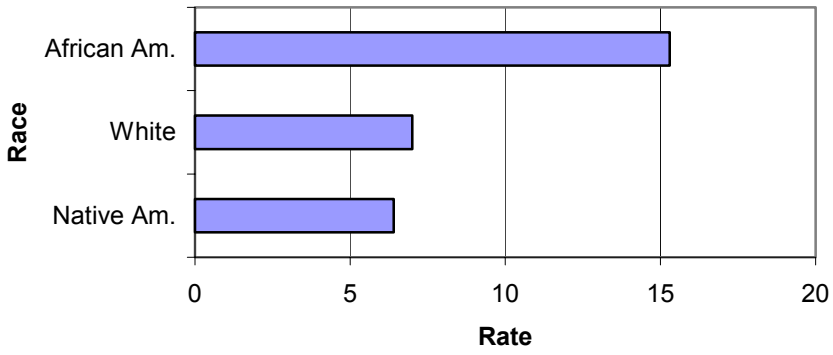
The infant mortality rate (IMR) is defined as the number of deaths of live-born babies during the first year of life per 1,000 live births. Infant mortality is considered the principal measure of health for a society. Despite dramatic decreases in infant mortality over the last century, disparities persist in the risk of infant death. In 2003, there were 391 infant deaths in Oklahoma, which equates to 7.7 infant deaths per 1,000 live births. Despite recent declines in Oklahoma, we are still behind the 2003 national rate of 6.6 infant deaths per 1,000 live births (Figure 22).

Figure 22. Five-year infant mortality trend
Oklahoma 1999-2003



When evaluating infant deaths by race, significant disparities become apparent. In 2003, infants of African American mothers were more than twice (2.2 times) as likely to die before their first birthday than those of White and Native American mothers (Figure 23).

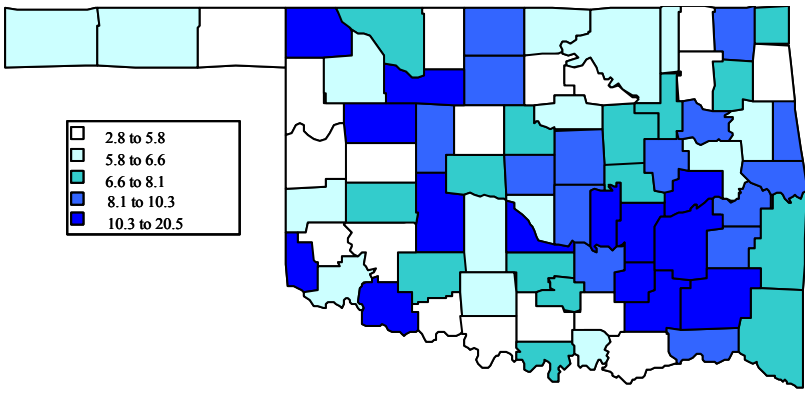
Figure 23. Infant Mortality rates, by race
Oklahoma 2003



For Oklahoma, 1999 to 2003, the southeast region, primarily consisting of rural counties, had higher infant mortality rates than the rest of the state. The two largest metropolitan

areas, Oklahoma County and Tulsa County, had a 5-year average rate of 9.3 and 7.9 infant deaths per 1,000 live births respectively (Figure 24).

Figure 24: Five year aggregated infant mortality rates, by county Oklahoma, 1999 - 2003



Teen mothers 17 years of age and younger have nearly twice (1.7 times) the risk for neonatal deaths than mothers aged 25 – 34 (Table 7). As the mother's age increases the rate of neonatal death decreases until the 35+ age group. This is also true for postneonatal deaths with the exception of 18 to 19 year olds and 30 to 34 year olds. When a mother gives birth after she turns 35, her risk of having an infant death nearly reaches that of her teenage counterpart.

Table 7. Age specific mortality rates among neonates, postneonates, and all infants Oklahoma 1999-2003

		Neonates		Postneonates		Infants	
Maternal Age		(Under 28 days)		(28 days-11 months)		(under 1 year of age)	
(Years)	Live Births	Deaths	Rate	Deaths	Rate	Deaths	Rate
Under 18	12478	76	6.1	44	3.5	120	9.6
18-19	25642	113	4.4	107	4.2	220	8.6
20-24	82824	328	4.0	286	3.5	614	7.4
25-29	67181	246	3.7	111	1.7	357	5.3
30-34	41912	157	3.7	88	2.1	245	5.8
35+	20238	118	5.8	53	2.6	171	8.4

The primary causes of infant deaths in Oklahoma are relatively consistent with those observed for the nation, with a few notable exceptions (Table 8). Septicemia occurs more frequently than the national average, and intrauterine hypoxia and birth asphyxia considerably less frequently. One category added in Oklahoma but not noted nationally is the group for ill-defined conditions, or group R (also called Chapter R) deaths according to the International Classification of Diseases, Tenth Revision (ICD-10). This group includes sudden infant death syndrome (SIDS), classification R95, which has been identified separately since the ICD-7 revision. Oklahoma has observed a significant drop in the number of deaths attributed to SIDS with a corresponding increase to the remainder of the R group of deaths. The primary reason for this shift is the reluctance of the State Medical Examiner's Office to classify unknown deaths to SIDS. The R group includes "…abnormal results of clinical or other investigative procedures", and it is used by many pediatricians and medical examiners because of their reluctance to classify deaths as SIDS.

Oklahoma will be completing an in-depth analysis of infant and fetal deaths during the next year and will provide an update to its comprehensive needs assessment when completed.

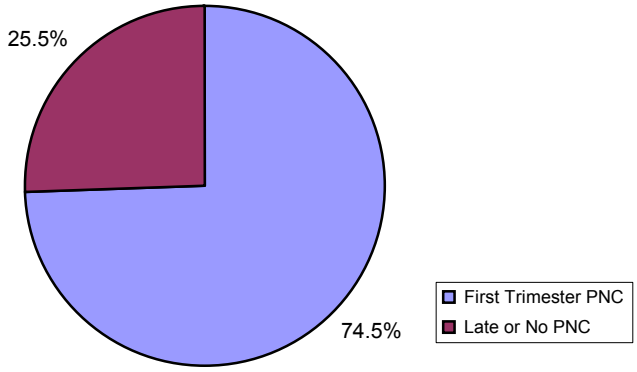
Table 8. Infant, neonatal, and postneonatal deaths, by cause
Oklahoma 2001-2003 and U.S. rank 2002

	Infant Deaths			Oklahoma Neonatal Deaths		Oklahoma Postneonatal Deaths	
	Oklahoma		U.S Rank				
	Number	Rank		Number	Rank	Number	Rank
Total deaths	1160			674		486	
Congenital malformations (Q00-Q99)	253	1	1	172	1	81	3
Disorders related to short gestation, low birth weight (P07)	143	2	2	141	2	2	10
Ill-defined symptoms, excluding SIDS (R00-R94, R96-R99)	139	3	(X)	24	6	115	1
Sudden infant death syndrome	96	4	3	13	9	83	2
Complications of placenta, cord and membranes (P02)	46	5	5	45	3	1	
Maternal complications (P01)	44	6	4	43	4	1	
Disease of the circulatory system	38	7	9	24	7	14	7
Respiratory distress (P22)	33	8	7	30	5	3	9
Septicemia (A40 -A41)	30	9		13	10	17	5
Accidents (V01-X59)	24	10	6	3		21	4
Bacterial sepsis (P36)	19		8	19	8	0	
Chronic respiratory disease (P27)	16			1		15	6
Assault (homicide) (U01, X85-Y09)	14			2		12	8
Intrauterine hypoxia and birth asphyxia (P20-P21)	13		10	12		1	
Residual	296			175		121	

Prenatal Care:

Early screening, diagnosis and treatment for potential obstetric complications and risky maternal behaviors have the potential to diminish poor birth outcomes. Research shows that women who receive first trimester prenatal care (PNC) are less likely to have a low birth weight infant. Oklahoma mothers routinely receive lower rates of first trimester prenatal care than mothers in surrounding states, despite recent decreases in the number of women delaying or not entering PNC. Seventy-five percent of Oklahoma mothers reported receiving first trimester prenatal care in 2000-2002, (Figure 25). Oklahoma mothers are significantly less likely to receive early prenatal care compared to the nation as a whole. The Healthy People 2010 Objective is for 90% of all women to receive prenatal care during their first trimester.

Figure 25. Percent of live births receiving first trimester prenatal care Oklahoma PRAMS 2000-2002



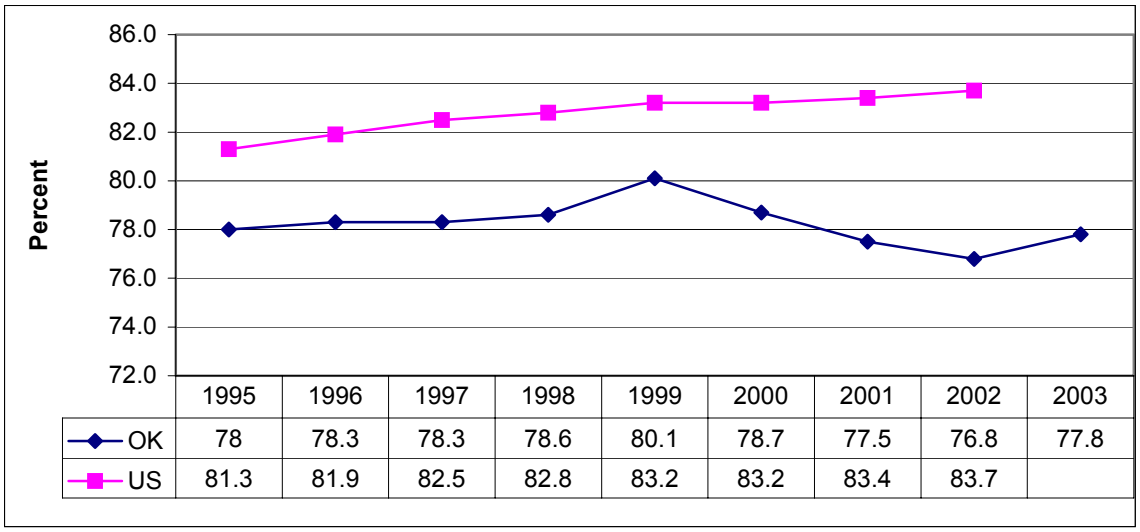
Although differences do exist between racial groups in Oklahoma, they are not statistically significant. Ethnicity, however, does play a role. Hispanic women are less likely to receive early prenatal care than non-Hispanic women (66.6% vs. 75.2%; (Table 9). Mothers with prenatal care paid for by Medicaid have significantly lower rates of first trimester entry compared to prenatal care paid by other sources (64.8% vs. 84.7%). Maternal education also plays a role; women with less than a high school education are the least likely to receive early care (60.8%), compared to those with a high school education (73.6%), and mothers with more than a high school education (84.2%). Women with unintended pregnancies are less likely to receive early care than women with intended pregnancies (64.6% vs. 84.6%).

The prevalence of low birth weight is lower with women who receive first trimester prenatal care, 6.4% compared to 8.4% for those with late PNC. Women with first trimester prenatal care are more likely to receive adequate prenatal care (as defined by the Kotelchuck index), which when controlled for race, education and smoking status has a very strong protective effect against low birth weight. By providing accessible, affordable and early prenatal care in Oklahoma we have the potential to improve maternal and infant health for those women most at risk.

Table 9. Percent of mothers receiving first trimester prenatal care, by selected characteristics: Oklahoma PRAMS 2000-2002

Characteristic	%	0.95 CI	χ^2
Total	74.5	(72.6, 76.3)	
Maternal Race			
White	75.5	(73.4, 77.4)	
African American	68.1	(61.1, 74.4)	
Native American	73.5	(67.0, 79.0)	NS
Maternal Ethnicity			
Non-Hispanic	75.2	(73.2, 77.1)	
Hispanic	66.6	(59.6, 73.1)	p < .05
Maternal Age			
< 20 years	62.8	(57.2, 68.1)	
20-30 years	76.6	(74.5,78.6)	
35 or older	75.8	(69.1, 81.4)	p < .0001
Maternal Education			
< 12 years	60.8	(55.4, 66.0)	
12 years	73.6	(70.3, 76.7)	
> 12 years	84.2	(81.7, 86.4)	p < .0001
Prenatal Care Covered by Medicaid			
No	84.7	(82.4, 86.6)	
Yes	64.8	(61.8, 67.7)	p < .0001
Pregnancy Intention			
Unintended	64.6	(61.6, 67.4)	
Intended	84.6	(82.4, 86.6)	p < .0001

Figure 27. Percent of mothers receiving first trimester prenatal care Oklahoma and U.S. 1995-2002



	1995	1996	1997	1998	1999	2000	2001	2002	2003
OK	78	78.3	78.3	78.6	80.1	78.7	77.5	76.8	77.8
US	81.3	81.9	82.5	82.8	83.2	83.2	83.4	83.7	

In 2003, Grant County had the highest percent of mothers receiving first trimester prenatal care at 94 percent, followed closely by Cotton County at 92 percent. Conversely, only sixty-one percent of mothers in Roger Mills County and Craig County received first trimester prenatal care. Ten counties reported having more than ten percent of their mothers receiving prenatal care in the third trimester or receiving no prenatal care at all (Blaine, Cherokee, Craig, Dewey, Jefferson, Kay, Latimer, McIntosh, Texas, and Tulsa) (Figures 27 and 28).

Figure 27. Percent of mothers receiving first trimester prenatal care Oklahoma 2003

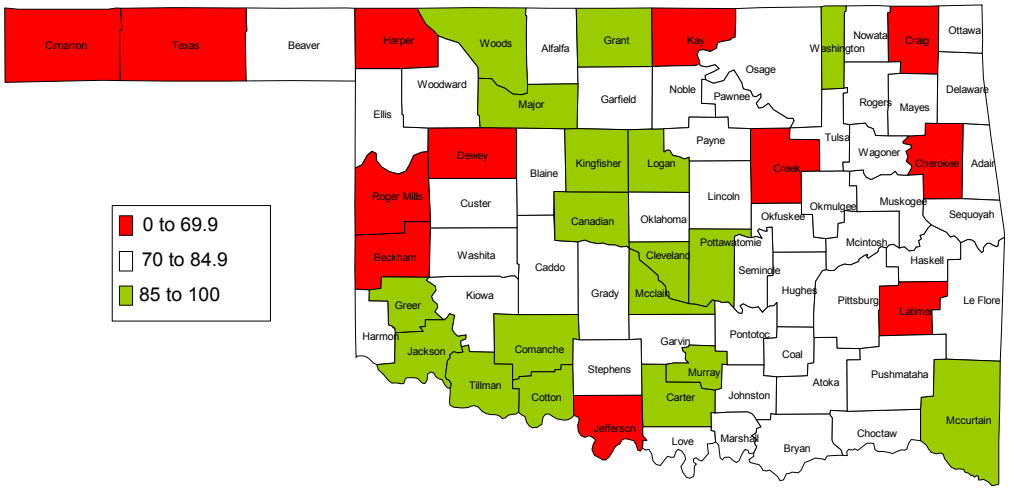
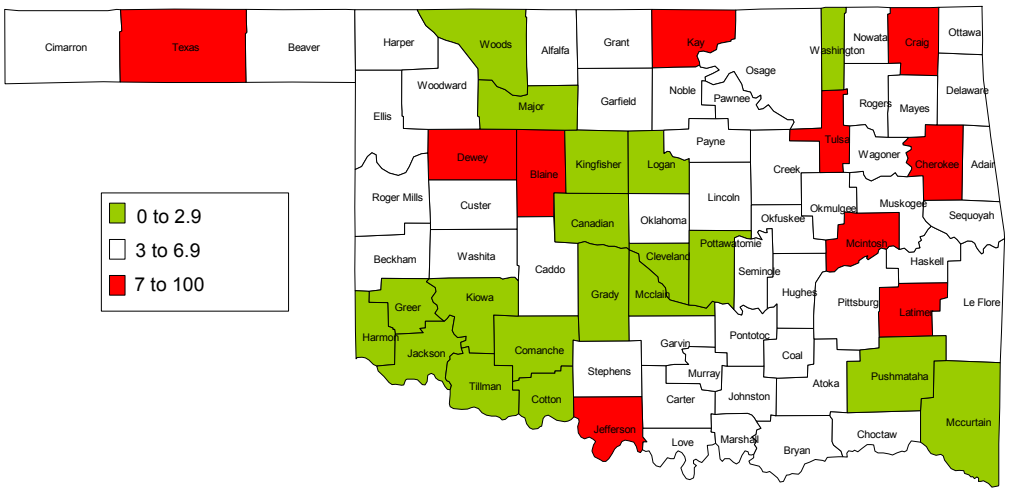


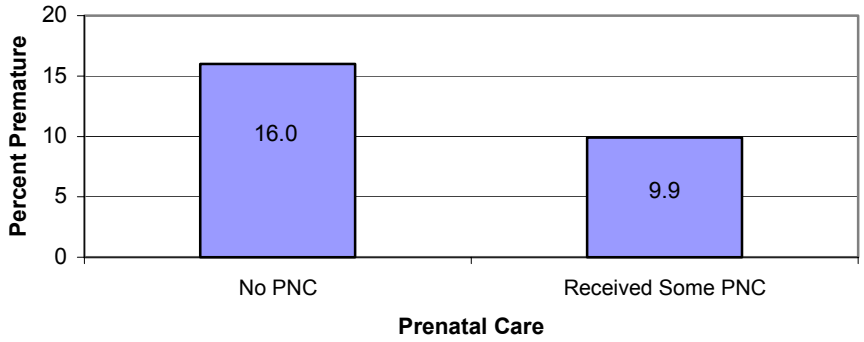
Figure 28. Percent of mothers receiving no prenatal care or care beginning in the third trimester: Oklahoma 2003



In 2003, of those births in Oklahoma with known gestational age, mothers who received no prenatal care were 1.6 times more likely to have a pre-term birth (16%) than mothers who received any amount of prenatal care (first, second, or third trimester) (9.9%).

Similarly, 90.1% of mothers who received any prenatal care had a normal weight birth versus only 83.9% of mothers who received no prenatal care (Figure 29).

Figure 29. Percent of births that are premature* by prenatal care use: Oklahoma 2003



* < 37 Weeks Gestation

Previous Births:

When and whether a mother enters into prenatal care appears directly correlated to the number of previous births the mother has had. Almost 78% (77.7) of women with no previous births enter into first trimester prenatal care, while the percentage of those with multiple births decreases steadily for each additional previous birth, except for mothers with one previous birth (Table 10). As expected, the proportion of multi-parous mothers receiving late or no prenatal care increases with each additional birth. It is possible that as mothers become more experienced or comfortable with giving birth and if no complications arose with any of the previous births, the more likely they are to seek late or no prenatal care.

Table 10. Resident singleton live births, by number of previous deliveries and time prenatal care began: Oklahoma 2003

Previous Live Births	Total		No Care		1st Trimester		2nd Trimester		3rd Trimester	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	19,727	(39.9%)	666	(3.4%)	15,312	(77.6%)	3,175	(16.1%)	574	(2.9%)
1	15,773	(31.9%)	544	(3.5%)	12,382	(78.5%)	2,364	(14.9%)	483	(3.1%)
2	8,694	(17.6%)	367	(4.2%)	6,335	(72.9%)	1,643	(18.9%)	349	(4.0%)
3	3,406	(6.9%)	169	(5.0%)	2271	(66.7%)	762	(22.4%)	204	(5.9%)
4	1,794	(3.6%)	151	(8.4%)	995	(55.5%)	491	(27.4%)	157	(8.8%)

* This table excludes 52 births for those mothers for whom parity was unknown.

Unintended Pregnancy:

Intention of pregnancy is ascertained by the Pregnancy Risk Assessment Monitoring System (PRAMS) question (Figure 31) that asked mothers to report their feelings about becoming pregnant in the time just before conception. Unintended pregnancies were defined as pregnancies for which the mother reported that she wanted to be pregnant later or did not want to be pregnant then or any time in the future.

Figure 31. PRAMS question to determine pregnancy intendedness

Thinking back to *just before* you got pregnant, how did you feel about becoming pregnant? Check one answer.

1) I wanted to be pregnant sooner
2) I wanted to be pregnant later
3) I wanted to be pregnant then
4) I didn't want to be pregnant then or at any time in the future

Overall, PRAMS data for this period show that 50 percent of pregnancies resulting in a live birth were unintended. Nearly two in five mothers (39%) giving birth between 2000 and 2002 stated that they wanted to be pregnant later, and the remaining 11 percent were mothers that reported they never wanted to be pregnant. In general, these numbers suggest that some 18,700 babies delivered annually are the result of a mistimed pregnancy and another 5,300 were unwanted at the time the mother became pregnant.

Table 11 shows that mothers who were younger, were not married, were African American or Native American, had a high school education or less, had an income level less than 185% of the federal poverty level, and were recipients of WIC or Medicaid benefits reported higher rates of unintended pregnancy than mothers in the respective comparison groups. For this report, women who reported that either their prenatal care or delivery was paid for by the State's Medicaid program are defined to be Medicaid recipients.

Table 11. Percent of births that were unintended by maternal demographics: PRAMS 2000-2002

	Unintended Pregnancy	
Characteristic	%	95% CI
Age		
< 20	78.0	(73.0, 82.3)
20-24	60.6	(56.9, 64.2)
25-29	37.7	(33.9, 41.6)
30 or older	34.3	(30.7, 38.3)
Marital Status		
Married	34.4	(31.9, 36.9)
Other	72.3	(69.1, 75.2)
Race		
White	46.7	(44.4, 49.0)
African American	70.2	(63.3, 76.2)
Native American	60.8	(54.0, 67.1)
Other	48.2	(34.0, 62.7)
Ethnicity		
Hispanic	50.7	(48.6, 52.9)
Non-Hispanic	44.7	(37.7, 51.9)
Education		
< 12 years	65.7	(61.2, 69.9)
12 years	54.6	(51.1, 58.0)
> 12 years	38.2	(35.2, 41.3)
Poverty Level		
<100% FPL	68.4	(63.9, 72.6)
100%-184% FPL	55.7	(51.4, 60.0)
≥ 185% FPL	32.2	(29.0, 35.6)
WIC during pregnancy		
No	35.8	(33.0, 38.7)
Yes	63.3	(60.4, 66.1)
Medicaid recipient		
No	36.1	(33.4, 38.9)
Yes	65.8	(62.8, 68.7)

Table 12 indicates that women who initiate prenatal care late (2nd or 3rd trimester entry) in their pregnancy were more likely to have viewed the pregnancy as unintended. Mothers reporting that prenatal care was not received as early as desired and/or that barriers to the receipt of prenatal care were encountered during their pregnancies were more likely to report an unintended pregnancy when compared to their relevant counterparts. Mothers who stated that they smoked during the last three months of pregnancy were nearly 1.5 times more likely to have an unintended pregnancy than nonsmokers. Somewhat counter intuitively, mothers that reported drinking during the third trimester of pregnancy had slightly lower rates of unintended pregnancy compared to non-drinking mothers (46.7% vs. 50.1%). It should be noted that only 3 percent of mothers reported drinking during the last three months of pregnancy. Consistency of alcohol consumption as reported on the PRAMS survey is problematic.

Table 12. Percent of births that were unintended, by pregnancy experiences Oklahoma PRAMS 2000-2002

Characteristic	Unintended Pregnancy %	95% CI
Previous live births		
No	51.3	(47.9, 54.6)
Yes	49.6	(46.9, 52.3)
Trimester entry into prenatal care		
1st	45.1	(42.7, 47.4)
2nd	70.2	(65.1, 74.9)
3rd	63.4	(49.8, 75.1)
Received prenatal care as early as desired		
No	70.9	(66.8, 74.7)
Yes	44.0	(41.6, 46.4)
Reported barriers to receiving prenatal care		
No	44.3	(42.0, 46.7)
Yes	70.5	(66.3, 74.3)
Smoked during 3rd trimester of pregnancy		
No	46.2	(43.9, 48.5)
Yes	66.2	(61.3, 70.7)
Alcohol use during 3rd trimester of pregnancy		
No	50.1	(48.0, 52.3)
Yes	46.7	(35.0, 58.8)

As shown in Table 13, women that reported ever breastfeeding (45.3%) their newborn were less likely to have an unintended pregnancy compared to mothers that did not initiate breastfeeding (60.1%). Mothers that delivered a low birth weight infant were significantly more likely to report that their pregnancy was mistimed or unwanted. Lastly, mothers reporting that they most often had placed their infants to sleep on the side or stomach had higher percentages of unintended pregnancies.

Table 13. Percent of births that were unintended by pregnancy conditions/outcomes,: Oklahoma PRAMS 2000-2002

Characteristic	Unintended Pregnancy %	95% CI
Initiated breastfeeding		
No	60.1	(56.3, 63.8)
Yes	45.3	(42.7, 47.8)
Infant birth weight		
< 2,500g	54.7	(52.9, 56.6)
≥ 2,500g	49.9	(47.6, 52.1)
Infant sleep position		
Back	46.7	(43.8, 49.6)
Side	50.7	(46.5, 54.9)
Stomach	57.0	(52.0, 61.8)

Contraception Use: Pre-pregnancy and Postpartum:

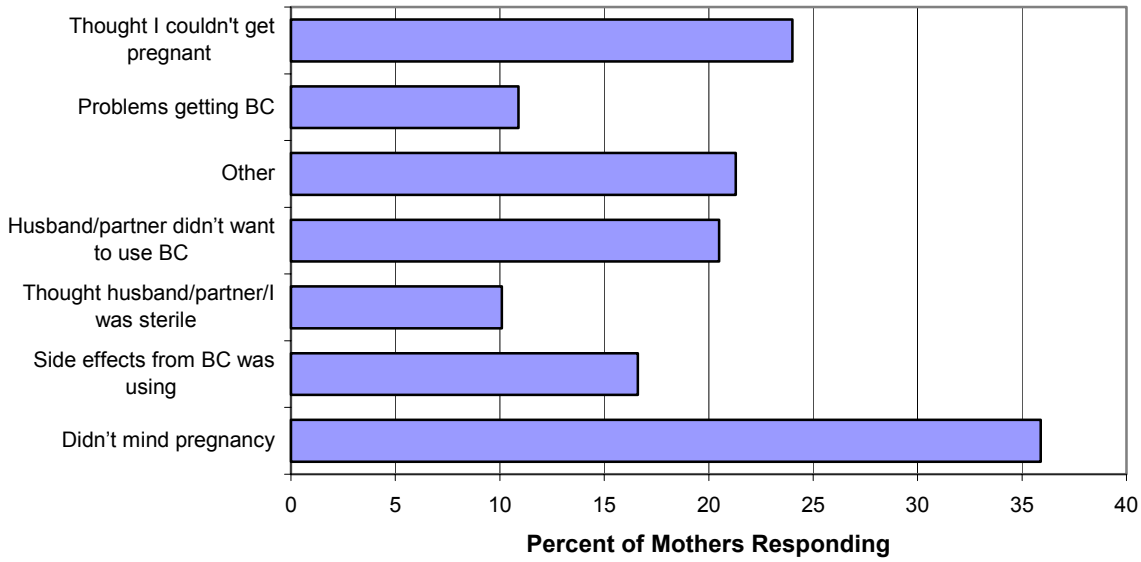
Pre-pregnancy and postpartum contraceptive use are strongly related to unintended pregnancy in Oklahoma. For mothers who indicated that their pregnancies were unintended, approximately 43.1% were using contraceptives prior to conception and 86.7% were using birth control postpartum. Among women with intended pregnancies, 27.3% reported contraceptive use prior to pregnancy and 84.5% indicated contraceptive use postpartum. Those groups of women least likely to use a method prior to pregnancy are African Americans, women who are unmarried, Hispanic women and women who have intended pregnancies. There were no true differences between groups of women for postpartum use of contraception, approximately 85.5% of women were using a method at the time they were surveyed approximately 2-6 months postpartum (Table 14). When asked why they did not use contraceptives prior to pregnancy, the three most common responses were "didn't mind getting pregnant", "thought I couldn't get pregnant" and "husband or partner did not want to use anything", (Figure 32). Respondents could check more than one reason. Adolescents were those most likely to check "thought I couldn't get pregnant".

Table 14. Contraceptive use before and after pregnancy
Oklahoma PRAMS 2000-2002

	Contraceptive Use When Became Pregnant		Postpartum Contraceptive Use	
Characteristic	%	95% CI	%	95% CI
Overall	39.7	(37.0, 42.4)	85.5	(83.9, 86.9)
Maternal Age				
< 20	38.6	(32.7, 44.8)	83.3	(78.7, 87.1)
20-24	39.4	(35.0, 43.9)	85.4	(82.5, 87.8)
25-29	43.6	(38.0, 49.3)	86.4	(83.4, 89.0)
30 or older	37.2	(31.7, 43.1)	85.8	(82.9, 88.4)
Maternal Education				
< HS	39.2	(34.1, 44.6)	82.8	(79.0, 86.0)
HS	37.9	(33.7, 42.3)	85.4	(82.7, 87.7)
> HS	42.5	(37.9, 47.1)	87.0	(84.7, 89.0)
Marital Status				
Unmarried	37.1	(33.6, 40.9)	84.4	(81.7, 86.7)
Married	43.5	(39.5, 47.5)	86.3	(84.4, 88.0)
Maternal Race				
White	40.3	(37.2, 43.4)	86.0	(84.3, 87.5)
African American	35.4	(28.0, 43.6)	82.5	(76.4, 87.3)
Native American	39.1	(31.3, 47.5)	85.9	(80.4, 90.0)
Other	39.7	(21.8, 60.7)	85.9	(73.2, 93.1)
Maternal Ethnicity				
Non-Hispanic	40.1	(37.3, 43.0)	85.7	(84.1, 87.2)
Hispanic	35.0	(26.3, 44.7)	82.6	(76.5, 87.3)
Pregnancy Intendedness				
Unintended	43.1	(40.0, 46.2)	86.7	(84.5, 88.6)
Intended	27.3	(22.3, 32.9)	84.5	(82.3, 86.5)

Due to limitations in the PRAMS survey, women are not asked about continuity of use or correct use of methods. Contraceptives, as defined by PRAMS, include less reliable forms of contraception such as withdrawal.

Figure 32. Reasons for not using contraceptives prior to pregnancy: Oklahoma PRAMS 2000-2002



Maternal Smoking

Tobacco use in Oklahoma is a serious public health concern. The high prevalence of tobacco users in our state contributes to a multitude of health problems, such as lung cancer and heart disease. Smoking among women of childbearing age brings additional complications and challenges, especially if they are using tobacco products before, during and/or after pregnancy. Research has shown a very strong association between maternal smoking and low birth weight.

Maternal smoking rates are high in Oklahoma. Thirty-one percent of women, who recently gave birth in Oklahoma, smoked during the three months prior to their pregnancy. While pregnant, 19.1% of women smoked and 26.7% smoked postpartum (Table 15). Women most at risk for smoking before pregnancy are those less than 20 years of age, with less than a high school education, women receiving Medicaid assistance and women who are Native American and Non-Hispanic (Table 15, 16). Although many women do abstain from smoking during their pregnancy, which research suggests can contribute favorably to birth outcomes, far too many continue to smoke during their third trimester (almost one in five pregnant Oklahomans). Those mothers at risk for smoking before their pregnancy are also those most likely to continue smoking during their third trimester and postpartum (Table 15).

Table 15. Percentage of mothers that reported smoking before[1], during[2], and after[3] pregnancy: Oklahoma PRAMS 2000-2002

Characteristic	Before		During		After	
	%	95% CI	%	95% CI	%	95% CI
Overall	31.1	(29.1, 33.1)	19.1	(17.4, 20.8)	26.7	(24.8, 28.6)
Maternal Age						
<20	42.9	(37.2, 48.7)	24.3	(19.6, 29.6)	38.9	(33.5, 44.6)
20-24	39.7	(36.0, 43.6)	23.1	(20.0, 26.5)	33.4	(29.9, 37.1)
25-29	26.5	(23.0, 30.2)	16.8	(13.9, 20.0)	22.5	(19.3, 26.1)
30 or older	19.2	(16.2, 22.5)	13.7	(11.2, 16.8)	15.9	(13.2, 19.1)
Maternal Education						
Less than HS	47.1	(42.4, 51.9)	34.4	(30.0, 39.0)	43.7	(39.1, 48.4)
Completed HS	37.9	(34.5, 41.5)	22.1	(19.3, 25.2)	32.8	(29.6, 36.2)
More than HS	16.9	(14.7, 19.5)	8.3	(6.7, 10.3)	12.3	(10.3, 14.6)
Marital Status						
Married	19.0	(17.0, 21.2)	11.6	(10.0, 13.4)	16.3	(14.4, 18.4)
Other	48.1	(44.6, 51.6)	29.6	(26.5, 32.8)	41.1	(37.7, 44.5)
Maternal Race						
White	32.4	(30.2, 34.7)	20.1	(18.3, 22.1)	27.4	(25.3, 29.6)
African Am.	18.3	(13.3, 24.5)	12.6	(8.5, 18.2)	17.5	(12.7, 23.6)
Native Am.	37.1	(30.5, 44.2)	19.4	(14.3, 25.7)	32.8	(26.5, 39.7)
Other	11.6	(4.8, 25.5)	8.4	(3.0, 21.3)	16.6	(8.0, 31.2)
Maternal Ethnicity						
Hispanic	15.4	(10.8, 21.5)	8.2	(4.9, 13.3)	12.7	(8.6, 18.5)
Non-Hispanic	32.7	(30.6, 34.8)	20.2	(18.4, 22.0)	28.0	(26.1, 30.1)

[1]Smoking during the three months prior to conception.
[2]Smoking during last three months of pregnancy.
[3]Smoking at the time the PRAMS survey was administered.

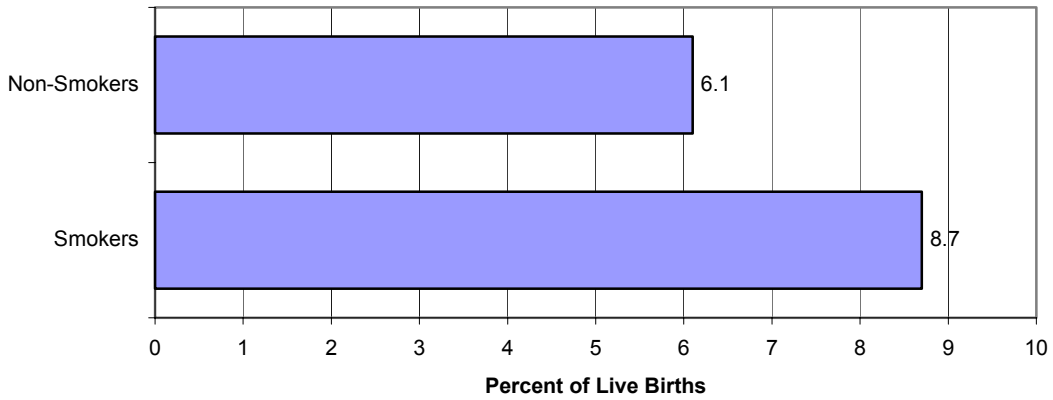
Table 16. Percentage of mothers that reported smoking before[1], during[2], and after[3] pregnancy: Oklahoma PRAMS 2000-2003

Characteristic	Before		During		After	
	%	95% CI	%	95% CI	%	95% CI
Poverty Level[4]						
< 100% FPL	44.0	39.2, 48.9	30.5	26.2, 35.1	39.4	34.8, 44.1
100% - 184% FPL	34.2	30.1, 38.6	20.3	17.0, 24.1	29.6	25.7, 33.8
≥ 185% FPL	19.2	16.6, 22.2	8.3	6.5, 10.5	14.6	12.2, 17.3
WIC Recipient[5]						
No	21.8	19.3, 24.4	12.0	10.1, 14.1	17.5	15.3, 19.9
Yes	39.7	36.7, 42.7	25.2	22.7, 28.0	34.8	32.0, 37.7
Medicaid Recipient[6]						
No	20.0	17.8, 22.4	10.3	8.6, 12.2	16.4	14.4, 18.7
Yes	44.0	40.8, 47.2	29.1	26.3, 32.1	38.4	35.4, 41.6
First Trimester Entry into Prenatal Care						
No	41.0	36.7, 45.5	28.7	24.8, 32.8	37.6	33.4, 42.0
Yes	27.7	25.6, 30.0	15.6	13.9, 17.5	22.9	20.9, 25.1
Pregnancy Intendedness						
Intended	22.3	19.9, 24.9	12.9	11.0, 15.1	18.3	16.1, 20.7
Unintended[7]	39.9	36.9, 43.0	25.3	22.7, 28.0	35.0	32.1, 38.0

[1]Smoking during the three months prior to conception.
[2]Smoking during last three months of pregnancy.
[3]Smoking at the time the PRAMS survey was administered.
[4]Federal Poverty Level
[5]WIC recipient defined as on WIC during pregnancy.
[6]Medicaid recipient defined as prenatal care or delivery paid for by Medicaid program.
[7]Unintended pregnancy defined as those pregnancies that were mistimed or unwanted.

PRAMS data show that women who smoke are significantly more likely to give birth to a low birth weight infant than women who do not smoke (8.7% vs. 6.1%). Low birth weight babies are at higher risk for needing medical intervention at delivery and are more likely to have long-term health problems (Figure 33).

Figure 33. Low weight births, by smoking status Oklahoma PRAMS 2000-2002



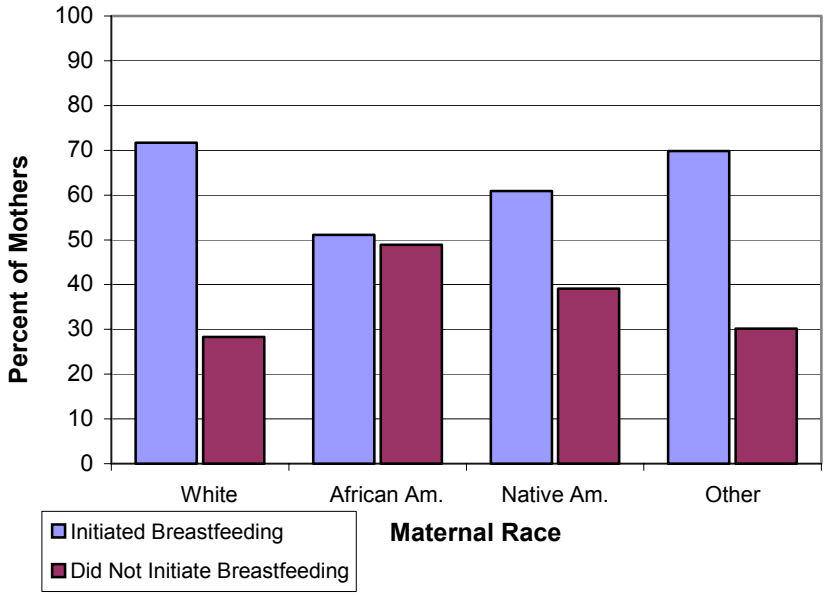
Breastfeeding Initiation and Duration:

Breastfeeding provides many health benefits for mother and child. For the mother, breastfeeding has been associated with a faster return to pre-pregnancy weight, decreased postpartum bleeding and decreased risk of ovarian and breast cancers. For the child, breastmilk provides immunities against infectious diseases, and has been associated with decreased risk for SIDS, diabetes, obesity and asthma for older children. Exclusive breastfeeding for 3-6 months is preferable and that important first step is encouraging mothers to initiate breastfeeding after delivery.

Breastfeeding initiation and duration data are obtained from the Oklahoma PRAMS survey. PRAMS asks mothers, "Did you ever breastfeed or pump breast milk to feed your new baby after delivery?" Women who respond "yes" are then asked, "Are you still breastfeeding/pumping milk" or "How many weeks or months did you breastfeed or pump breast milk to feed your baby?" However because PRAMS surveys are sent between 2-6 months postpartum, those mothers who return surveys within 8-9 weeks limit the time period duration can be studied. Therefore the longest period of duration is defined as "more than eight weeks".

According to Oklahoma PRAMS data, 68.9% of women initiated breastfeeding during 2000-2002. Mothers who are White were more likely to breastfeed than mothers who are African American or Native American (71.7% compared to 51.1% and 60.9%, respectively, $p<0.0001$) (Figure 34). Hispanic mothers in Oklahoma initiated breastfeeding at higher rates than non-Hispanic mothers (75.9% vs. 68.3%, $p<0.05$).

Figure 34. Mothers initiating breastfeeding, by race
Oklahoma PRAMS 2000-2002



Factors relating to socioeconomic status, such as maternal education and Medicaid funded prenatal care, revealed a strong relationship with initiation rates. Women with more than 12 years of education were more likely to begin breastfeeding than those with less than a high school education (80.8% and 54.6%, p<0.0001). Women with a high school education initiated at 62.8%. Among women with prenatal care paid for by Medicaid, only 59.3% initiated breastfeeding (Table 17) compared to 78.1% of women without Medicaid during their prenatal period.

Table 17: Prevalence of breastfeeding initiation
Oklahoma PRAMS 2000-2002

Characteristic	N	%	.95 CI	Π^2
Overall	5,251	68.9	66.9, 70.9	
Maternal Race				
White	4,072	71.7	69.5, 73.8	p < .0001
African Am.	542	51.1	43.8, 58.3	
Native Am.	517	60.9	53.9, 67.4	
Other	100	69.8	54.1, 81.9	
Maternal Ethnicity				
Non-Hispanic	4,815	68.3	66.1, 70.3	p < .05
Hispanic	436	75.9	69.0, 81.7	
Maternal Age				
< 20	753	59.1	53.3, 64.6	p < .0001
20-24	1,636	64.7	61.0, 68.3	
25-29	1,410	72.5	68.8, 76.0	
30 or older	1,451	75.8	72.2, 79.1	
Maternal Education				
< 12 years	765	54.6	49.0, 60.1	p<.0001
12 years	1,802	62.8	59.2, 66.3	
> 12 years	2,211	80.8	78.1, 83.2	
Marital Status				
Married	3,176	77.2	74.9, 79.3	p < .0001
Other	2,043	57.3	53.8, 60.7	
Previous Live Births				
None	2,213	71.6	68.4, 74.6	p < .0001
One	1,627	71.2	67.7, 74.4	
Two	868	61.8	56.9, 66.5	
Three or more	525	63.6	56.8, 70.0	
Pregnancy Intendedness				
Intended	2,680	75.1	72.5, 77.6	p < .0001
Unintended	2,506	62.4	59.3, 65.3	
Prenatal Care Covered by Medicaid				
No	2,685	78.1	75.6, 80.4	p<.0001
Yes	2,476	59.3	56.2, 62.3	

Pregnancy intention and the presence of other children in the home also impacted breastfeeding initiation rates. Of women who defined their pregnancy as mistimed or unwanted, only 62.4% initiated breastfeeding compared to 75.1% with intended pregnancies (p<0.0001). Mothers with no previous births or with only one child were also more likely to initiate breastfeeding than women with two or more children (Table 16).

When assessing the duration of breastfeeding, Oklahoma PRAMS data show 62.1% of all women who have recently given birth in Oklahoma breastfed for at least seven days (Table 18). This number is somewhat lower than the national average of 68.9% found by the Centers for Disease Control and Prevention (CDC) 2003 Immunization Survey. Approximately 60 percent of women who initiate breastfeeding in Oklahoma continue for more than eight weeks. Those women most likely to breastfeed for more than eight weeks have higher levels of education, are non-smokers, are married and are older than 25. The statewide prevalence for breastfeeding more than eight weeks for all mothers, regardless of whether or not they initiated breastfeeding, is 40%. This number is significantly smaller than the national average of 55.2%. Exclusivity of breastfeeding is an important factor to consider as well and again Oklahoma is not keeping pace with the rest of the nation, putting infants at higher risk for illnesses and long term health problems. Data from PRAMS show that, among mothers who initiate breastfeeding, only 16.1% are breastfeeding exclusively, irrespective of duration.

Table 18. Duration of breastfeeding among mothers who began breastfeeding: Oklahoma PRAMS 2000-2002

Duration of Breastfeeding	Percent	95%CI
< 1 week	6.2	5.1, 7.6
1-8 weeks	33.11	30.8, 35.5
> 8 weeks	60.7	58.2, 63.1

Teen Pregnancy:

Child bearing by teenage parents poses many challenges to the health care system. Infants who are born to teen mothers are at increased risk for adverse outcomes at birth. These infant outcomes include low birth weight, very low birth weight, small for gestational age, prematurity, late fetal loss, and infant mortality. Young adolescent mothers were more likely to have increased rates of preeclampsia, eclampsia, anemia, operative vaginal delivery, and postpartum hemorrhage, in addition to higher rates of poverty and less adequate parenting skills.

The majority of young women under 20 giving birth in Oklahoma are White (70.3%), unmarried (77.1%), and with no previous births (78.5%). Two-thirds of these young mothers identify their pregnancies as unwanted. Significant racial disparities exist in adolescent teen pregnancy rates. Almost one-fourth (24.5%) of births to African American mothers are to teens compared to only 13.3% of births for Whites. Similarly, 24.3% of births to Native American mothers were to teens. Comparing Hispanic and Non-Hispanic births, only 8.8% of births to teens were to Hispanic mothers (Table 19). Poor birth outcomes are strongly associated with adolescent pregnancy. The pre-term birth rate is 46% higher for teens relative to adults (Table 20). Teens were 1.5 times more

likely to have a low birthweight (< 2,500 grams) delivery than non-teen mothers. Teen mothers were also more likely to have a very low birth weight (< 1,500 grams) infant compared to mothers over 20, (1.4% vs. 1.0%).

Also associated with these risks, teen mothers were more likely to gain more than the recommended weight during pregnancy, with nearly 60% of all teen births falling into this category (Table 20). Teens in Oklahoma are more likely to smoke antepartum, intrapartum and postpartum (Table 15) and are less likely to breastfeed (Table 17). All of which has been shown to contribute negatively to health outcomes for the infant and the mother. Financial impact to the state also results from teen pregnancy, both short and long term. PRAMS data show that almost two-thirds (64.9%) of teen mothers have prenatal care funded by Medicaid compared to 38% of women over 20. Approximately 30% of teen mothers are on some form of public assistance.

Table 19. Percent of social and demographic characteristics among teens and non-teen mothers: Oklahoma PRAMS 2000-2002

	Age Groups			
	≤ 17	**18-19**	**<20**	**≥20**
Characteristic	% (se)	% (se)	% (se)	% (se)
Race				
White	65.6 (4.9)	72.5 (3.1)	70.3 (2.6)	81.6 (0.9)
African American	21.8 (4.3)	11.4 (2.2)	14.8 (2.1)	8.1 (0.6)
Native American	12.5 (3.3)	15.5 (2.5)	14.5 (2.0)	8.0 (0.6)
Ethnicity				
Non-Hispanic	93.0 (2.4)	90.3 (2.1)	91.2 (1.6)	90.9 (0.7)
Hispanic	7.0 (2.4	9.7 (2.1)	8.8 (1.6)	9.1 (0.7)
Marital Status At Conception				
Married	6.6 (2.4)	14.2 (2.3)	11.7 (1.8)	66.5 (1.1)
Other	93.5 (2.4)	85.8 (2.3)	88.3 (1.8)	33.5 (1.1)
Previous Live Births				
None	85.0 (3.8)	75.4 (3.0)	78.5 (2.4)	33.6 (1.1)
One	12.3 (3.5)	20.5 (2.8)	17.8 (2.2)	34.7 (1.1)
Lives With Babies' Father				
No	61.6 (5.1)	33.7 (3.4)	42.5 (2.9)	16.4 (0.9)
Yes	38.4 (5.1)	66.3 (3.4)	57.5 (2.9)	83.7 (0.9)
Income Source				
Job/Business	80.8 (4.1)	86.6 (2.4)	84.8 (2.1)	91.6 (0.7)
Public Assistance	28.1 (4.7)	31.7 (3.3)	30.5 (2.7)	15.3 (0.8)
Unemployed/Alimony/Social Security	25.4 (4.6)	15.7 (2.6)	18.8 (2.3)	14.3 (0.8)
Family/Other	31.7 (4.8)	41.9 (3.5)	38.6 (2.8)	24.3 (1.0)
Using Contraceptives When You Became Pregnant				
No	60.1 (5.5)	62.1 (3.8)	61.4 (3.1)	60.0 (1.5)
Yes	39.9 5.5)	37.9 (3.8)	38.6 (3.1)	40.0 (1.5)

Table 20: Percent of mothers with adverse pregnancy outcomes, by age group: Oklahoma PRAMS 2000-2002

Characteristic	≤17		18-19		<20		≥20	
	%	C.I.	%	C.I.	%	C.I.	%	C.I.
Pre-term Births[1,2]	12.1	7.5, 18.9	10.6	7.5, 4.8	11.1	8.4, 4.5	7.6	6.7, 8.6
Birth Weight <1,500g[1]	1.7	1.4, 2.1	1.2	1.0, 1.4	1.4	1.2, 1.5	1.0	0.9, 1.0
Birth Weight < 2,500g[1]	9.5	7.4, 12.0	7.9	6.7, 9.3	8.4	7.3, 9.6	5.8	5.6, 6.0
Pregnancy Weight Gain[1,3]								
Under Recommended	19.0	12.0, 28.9	11.9	8.1, 17.3	14.2	10.5, 8.8	20.6	18.7, 2.6
Within Recommended	26.7	18.2, 37.3	27.3	21.4, 34.2	27.1	22.1, 32.8	35.6	33.4, 7.9
Over Recommended	54.3	43.4, 64.8	60.7	53.5, 67.5	58.7	52.7, 64.5	43.8	41.4, 6.2

[1]Singleton births only
[2]Gestational age <37 weeks
[3]Adjusted for gestational age and pre-pregnancy body mass index

Health Insurance:

Having insurance is a key component for access to health care and the use of preventive health practices. Preconception care is important to healthy pregnancies. Identifying risky behaviors, illnesses or conditions that may complicate pregnancy, and education about folic acid before conception may be as beneficial to an infant's health as early prenatal care. However many women in Oklahoma do not have health insurance prior to pregnancy, which constitutes a huge barrier to access to care.

Table 21:Percentage of mothers with insurance and/or Medicaid prior to pregnancy: Oklahoma PRAMS 2000-2002

Characteristic	Had Insurance Before Pregnancy (not incl. Medicaid)		Was On Medicaid Before Pregnancy	
	%	95% CI	%	95% CI
Overall	53.6	51.6, 55.7	9.6	8.4, 10.9
Maternal Age				
< 20	34.2	29.0, 39.9	23.4	18.9, 28.6
20-24	38.8	35.3, 42.5	10.1	8.0, 12.7
25-29	62.0	58.0, 65.7	6.3	4.5, 8.6
30 or older	74.1	70.5, 77.5	4.3	2.9, 6.3
Maternal Education				
< HS	26.2	22.3, 30.5	22.3	18.6, 26.4
HS	42.7	39.3, 46.2	8.3	6.5, 10.5
> HS	78.2	75.4, 80.7	3.6	2.5, 5.1
Married				
No	33.8	30.6, 37.1	16.8	14.4, 19.6
Yes	67.8	65.3, 70.2	4.4	3.4, 5.6
Maternal Race				
White	56.7	54.3, 59.0	6.9	5.8, 8.3
African American	50.0	42.8, 57.1	31.9	25.5, 39.1
Native American	32.1	26.1, 38.7	10.4	6.8, 15.6
Other	51.7	37.2, 65.9)	11.1	4.5, 24.8
Maternal Ethnicity				
Non-Hispanic	55.8	53.7, 58.0	9.8	8.5, 11.2
Hispanic	31.2	25.0, 38.1	7.2	4.2, 12.2

According to Oklahoma PRAMS data, 53.6% of women had insurance before pregnancy and 9.6% were on Medicaid. Those least likely to have insurance before they became pregnant were: younger than 25; a high school education or less; unmarried; and Hispanic or Native American. Women most likely to be Medicaid recipients before pregnancy were under 20 years of age, African American, and had less than a complete high school education (Table 21).

Almost half of pregnant women in Oklahoma receive some type of Medicaid funded pregnancy-related care, either prenatal care or delivery. However many of these women do not qualify for Medicaid until they are pregnant and lose their coverage 60 days postpartum. Women who are under 20, have less than a high school education, unmarried, African American and Hispanic are those groups most likely to receive Medicaid (Table 21).

Obesity and Overweight:

Although statewide data on this issue focusing solely on women of childbearing age are not currently available in Oklahoma, the prevalence of obesity among all women has been assessed. The percentage of women who are obese has increased from 13.6% in 1990 to 23.9% in 2003 according to 2003 Oklahoma Behavioral Risk Factor Surveillance System (BRFSS) data. Physical activity plays a role in controlling weight gain; however, 40.5% of Oklahoma adults do not participate in *adequate* amounts of physical activity and almost 20% do not participate in any leisure time physical activity (OK BRFSS, 2003). Additionally, Oklahoma ranks *last* in the nation in the percent of adults who consume five or more fruits and vegetables per day (15%), compared to the US median of 22.6% (OK BRFSS, 2003). More state-specific information is needed about this epidemic among women ages 15-44 and its role in complications during pregnancy such as gestational diabetes and pre-eclampsia.

Assessment of Child and Adolescent Health

Illness and Injury:

Parent-perceived health status (Figure 35) for the majority of first graders is defined as "excellent", with more than a third having "very good" health. However more than one in ten first graders had guardians who defined their health as "good", indicating that for many youngsters health may not be at an optimal level. When asked by the First Grade Health Survey how many days in the past three months a child's activity had been limited due to illness, 14.7% were unable to participate in regular activities for four or more days (Table 22). No analysis was performed to determine if those children with more limitations have special health care needs or how many fell into the fair or poor health category, all statistics are descriptive only.

Figure 35. Health status of child as determined by parent/guardian
Oklahoma First Grade Health Survey 2001

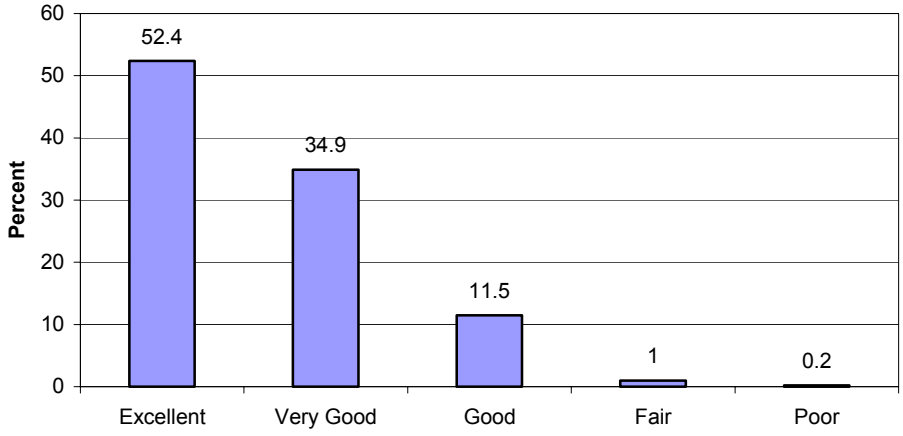


Table 22. Number of days activity was limited in the last three months
Oklahoma First Grade Health Survey 2001

	Percent	Std. Error
None	29.1	0.01
One day	25.4	0.01
Two to three days	27.2	0.01
Four to five days	9.1	0.006
Six or more days	5.6	0.005

When asked to identify diagnosed health conditions, those most common among this population were asthma (15.3%), speech and language delays (10.7%), poor eyesight (11.6%) and cavities (43.99%) (Table 23).

Table 23: Diagnosed Health Conditions Among First Graders
Oklahoma First Grade Health Survey 2001

Condition	Percent	95% Confidence Interval
Asthma	15.3	13.5, 17.1
Diabetes	0.1	0.0, 0.3
Epilepsy[1]	1.2	0.6, 1.7
Heart Condition[2]	0.7	0.3, 1.2
Anemia	5.2	4.0, 6.2
Poor Hearing	5.1	4.0, 6.2
Learning Disability	4.8	3.8, 5.9
Attention Deficit Disorder	4.2	3.2, 5.3
Hyperactivity	5.5	4.3, 6.6
Speech/language Delays	10.7	9.1, 12.2
Orthopedic[3]	1.2	0.6, 1.7
Poor eye Sight	11.6	10.0, 13.2
Cavities[4]	44.0	41.5, 46.4

[1] Epilepsy, convulsions or seizures without fever
[2] Heart condition requiring surgery or medication
[3] Ongoing bone, joint, or other orthopedic conditions
[4] Any type of tooth decay or cavities

Nearly 49% of the parents responding to the Fifth Grade Health Survey considered their child's general health to be excellent (Figure 36). Thirty-seven percent considered it to be very good and less than 1% considered it to be poor. When asked how many days during the last three months the child's activity was limited due to illness 5.6% answered four or more. The majority of fifth grade children had no activity limitations due to illness (53.4%). The three most commonly diagnosed illnesses/conditions for the fifth grade population are tooth decay, allergies and poor eyesight (needing glasses or corrective surgery). As with the first grade population, tooth decay is the most prevalent, 42.6% of students have been diagnosed with this problem (Table 24).

Figure 36: Parent/guardian perceived health status of child
Oklahoma Fifth Grade Health Survey 2001

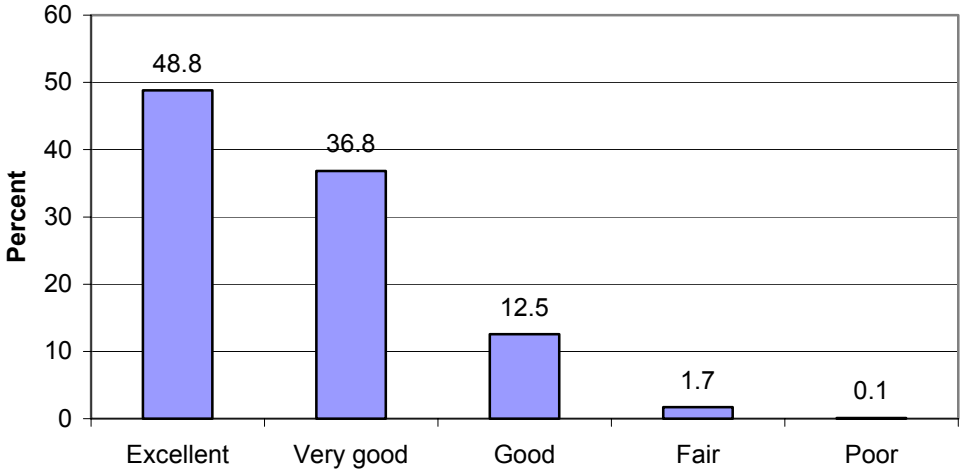


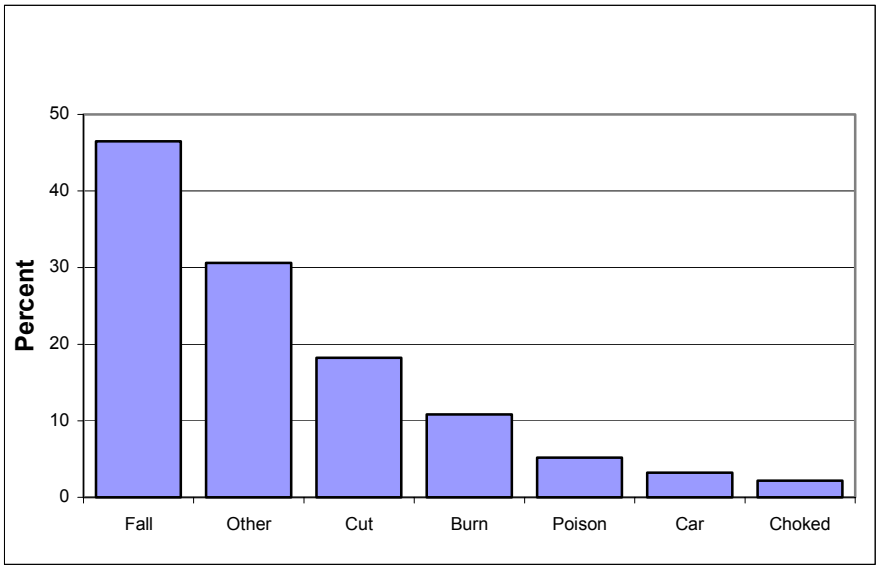
Table 24: Diagnosed health conditions among fifth graders
Oklahoma Fifth Grade Health Survey 2001

Condition	Percent	95% Confidence Interval
Asthma	16	14.5, 17.6
Diabetes	0.4	0.1, 0.7
Epilepsy[1]	0.9	0.5, 1.3
Heart[2]	0.8	0.4, 1.2
Anemia	2.2	1.5, 2.8
Hearing	3.2	2.4, 3.9
Hearing Aid	0.4	0.1, 0.6
Learning Disability	6.1	5.1, 7.1
ADHD	7.0	5.6, 8.0
Mental Retardation	1.1	0.6, 1.5
Hyperactivity	5.4	4.5, 6.4
Speech	6.9	5.8, 7.9
Bone Condition[3]	1.8	1.2, 2.3
Poor Eye Sight	17.7	16.1, 19.3
Eye Glasses[4]	32.2	30.2, 34.1
Tooth Decay[5]	42.6	40.6, 44.7
Allergies	33.5	31.5, 35.5
Other	5.2	4.3, 6.1

[1] Epilepsy, convulsions, or seizures without fever
[2] Heart condition requiring surgery or medication
[3] Ongoing bone, joint, or other orthopedic condition
[4] Wear eye glasses or have corrective surgery
[5] Any type of tooth decay or cavity

Unintentional Injury:
The Oklahoma Toddler Survey (TOTS) asks mothers if their child has had an injury that required treatment by a health care professional. Of mothers surveyed during 1998-2000, over 22% indicated that their toddler had been injured at least once if not more (22.5%, 95%CI = 20.3, 25.0). These injuries are identified by general type of injury in Figure 37. Falls are the most prevalent for this age group, which is consistent with national studies and statistics.

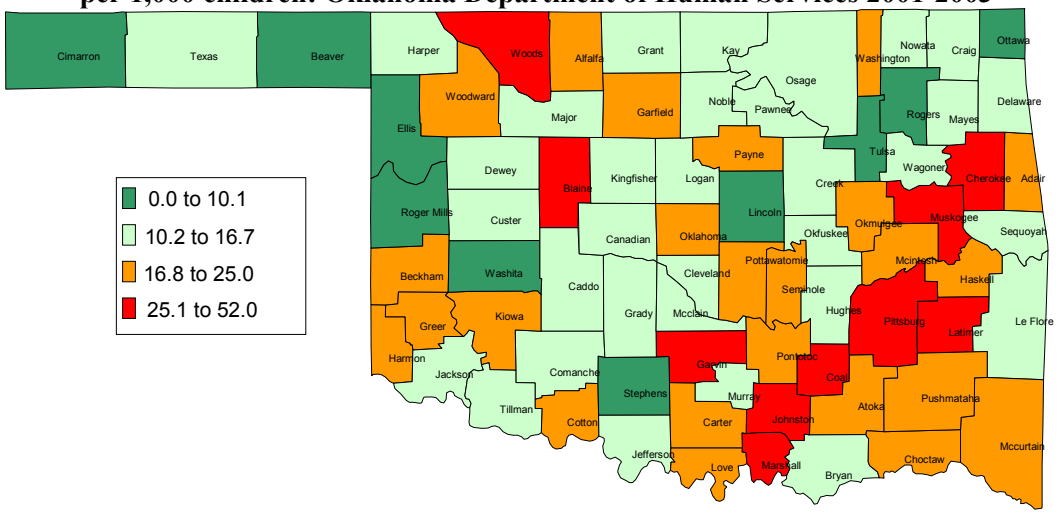
Figure 37. Percent of toddler injuries treated by health care provider, by type of injury: TOTS 1998-2000



Child Abuse and Neglect:
Although the number of confirmed cases of child abuse and/or neglect has declined in recent years, it is still 67% higher than it was twenty years ago. The three-year rate of confirmed cases of child abuse and/or neglect was 15.0 per 1,000 children in the community between Fiscal Year (FY) 2001 and FY 2003. During the three-year period before that (FY 1998 – FY 2000), the rate of confirmed cases of child abuse and/or neglect was 17.8 per 1,000 children. That means that there was a 15.7% decrease between the 1998-2000 rate and the 2001-2003 rate. The decrease in confirmed child abuse and neglect cases may be in part due to a 22.6% decrease in investigation and assessment workers in Oklahoma between 2001 and 2003.

White children make up the vast majority (69.2%) of confirmed child abuse and/or neglect cases. However, non-White children are disproportionably represented, comprising almost 30% of confirmed cases but only 20% of the total population of children under 18. Disparities also exist among counties. The county average confirmed child abuse and/or neglect rate is 16.8 per 1,000 children. Coal County has the highest rate at 46.6 confirmed cases per 1,000 children. In contrast, Cimarron County has the lowest rate at 0.8 confirmed cases per 1,000 children (Figure 38).

Figure 38. Rate of confirmed child abuse and neglect cases in Oklahoma per 1,000 children: Oklahoma Department of Human Services 2001-2003



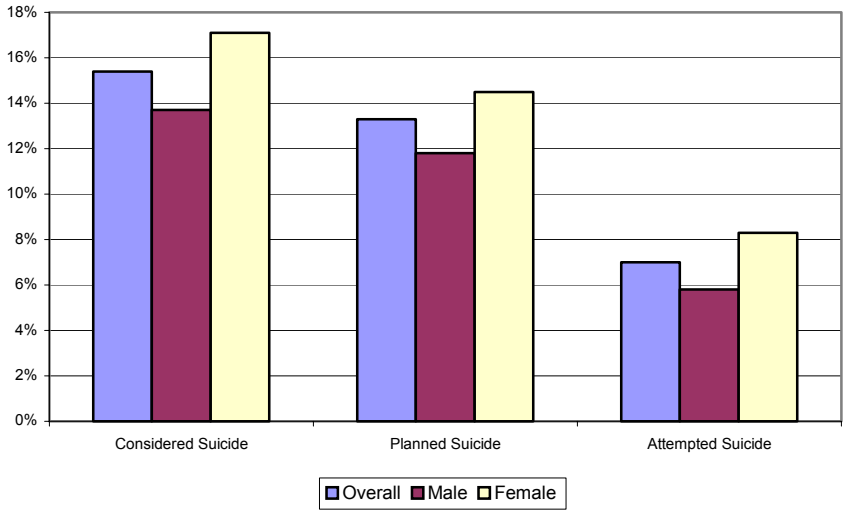
Motor Vehicle Injury:

In 2002, 22.9% of people involved in a motor vehicle crash (MVC) were age 20 or younger, including bicyclists, drivers, pedestrians, and passengers. Of those involved in MVCs, 38.4% of them had non-fatal injuries and 3.1% were fatally injured. This age group made up 30.6% of all motor vehicle accident injuries and 26.9% of all motor vehicle accident fatalities. Overall, 19.5% of drivers involved in MVCs in 2002 were between the ages of 16-20. Also, 53.3% of speed related crashes involving 16-20 year olds were single vehicle accidents and the majority were caused by either exceeding the legal speed limit, driving an unsafe speed in the rain or on a wet roadway, or traveling an unsafe speed on a curve or turn.

Suicide:

Youth Risk Behavior Survey (YRBS) data for 2003 show that 7.0% of the Oklahoma high school population have actually attempted suicide one or more times during the past year (Figure 39). Additionally, 2.4% of the students who attempted suicide during the past year resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse.

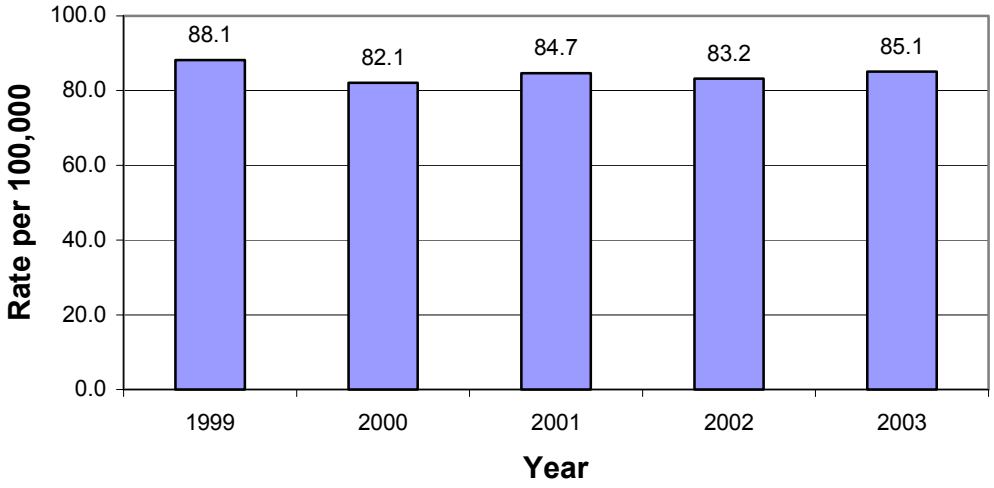
Figure 39. Suicide tendencies within past year among high school students Oklahoma YRBS 2003



Other Child and Adolescent Mortality:

Between 1999 and 2003, the child and adolescent mortality rate (aged 24 years and younger) has declined by only 3.4%. In 1999, the Oklahoma child and adolescent mortality rate for all causes was 88.1 per 100,000, and in 2003 it was reduced to only 85.1 per 100,000 population (Figure 40). The lowest rate for the five-year period occurred in the year 2000 with a rate of 82.1 deaths per 100,000 children ages 24 and younger.

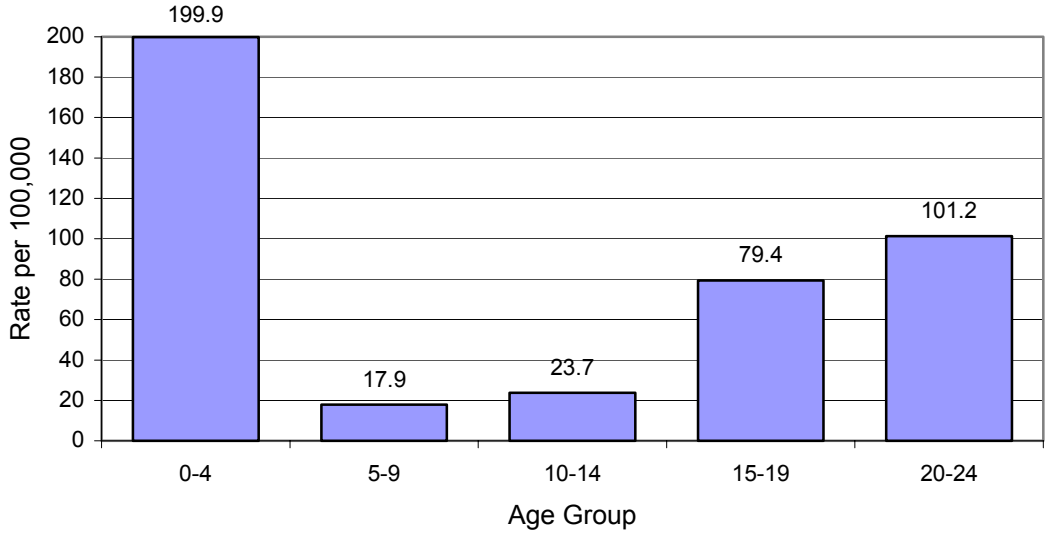
Figure 40. Mortality rates for Oklahomans ages 24 and younger Oklahoma 1999- 2003



When most recent (2003) mortality rates are broken down into age ranges of five-year increments, there are noticeable differences among the age groups. The lowest mortality

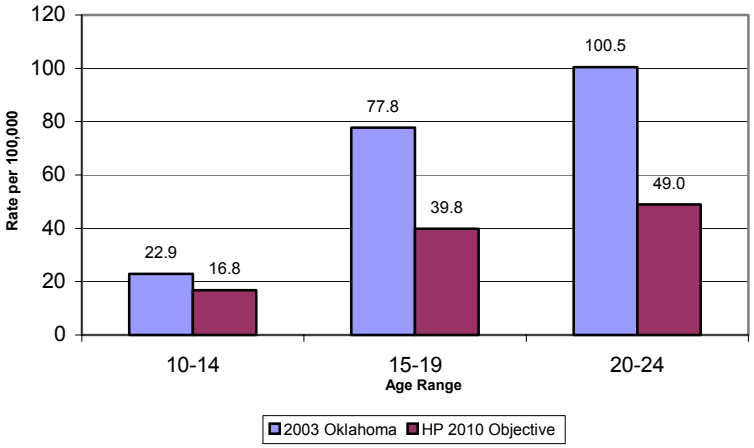
rate is found within the 5-9 year-old age group at 17.9 per 100,000 population, and the highest in the 0-4 age group with a mortality rate 199.5 per 100,000 (Figure 41). This high rate can be attributed to infant deaths and is covered more in depth in the Maternal and Infant Health section. Excluding this youngest age group, mortality rates increase with age due to the much higher rates of death due to accidents and violence as children age into adolescence and adulthood.

Figure 41. Age-specific mortality rates
Oklahoma 2003



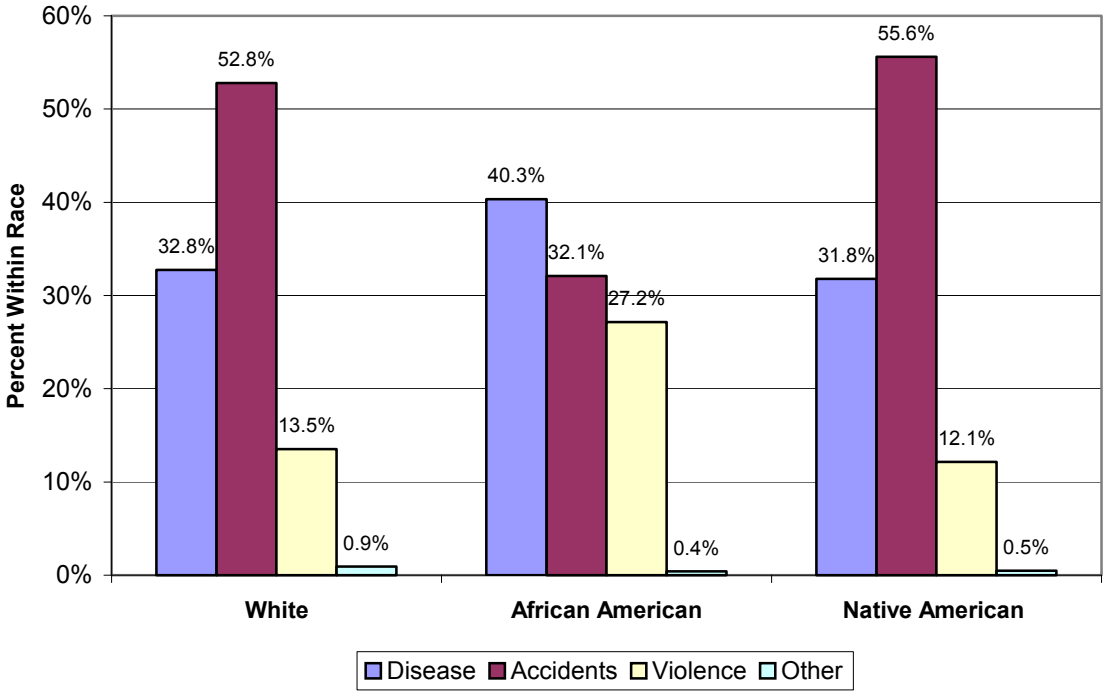
When the 2003 Oklahoma mortality rates are compared to the Healthy People 2010 (HP2010) objectives for the age ranges of 10-14, 15-19, and 20-24, Oklahoma falls far behind (Figure 42). Oklahoma mortality rates for all age ranges exceed the HP objective. The 10-14 Oklahoma age range is 36.3% higher, the 15-19 age range is 99.5% higher, and the 20-24 age range is 106.5% higher than HP2010.

Figure 42. 2003 Oklahoma death rates vs. Healthy People 2010 Objectives



All deaths between 1999 and 2003 were analyzed by race, White, African American, and Native American, and put into one of four general categories: Disease, Accidents, Violence, and Other. The Accidents category includes all motor vehicle deaths, irrespective of intent. The Other category primarily refers to those deaths where a definitive cause could not be determined. Deaths for children and adolescents ages 1-19 were analyzed. Among Whites and Native Americans, accidents made up the majority of deaths, 52.8% and 55.6%, respectively (Figure 43). Within this age group, the highest percentage of African American deaths was attributed to disease.

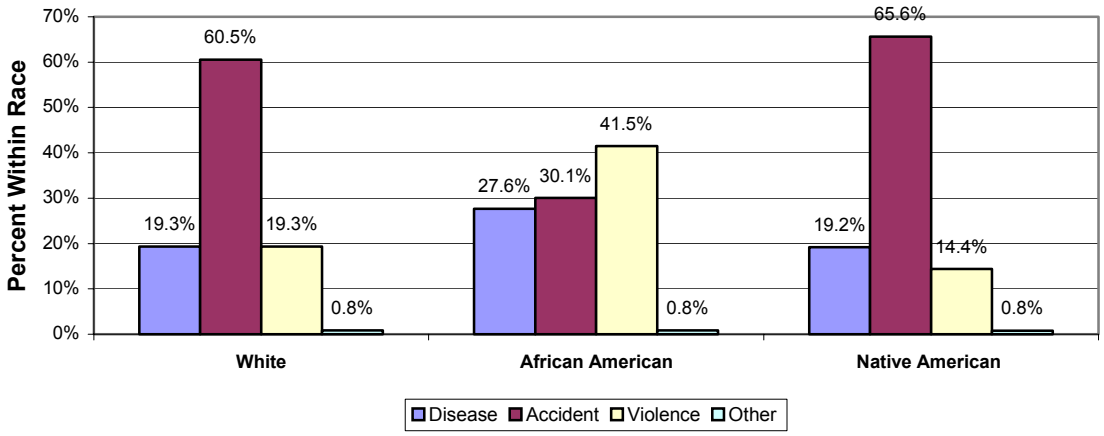
Figure 43. Percent of deaths among children ages 1-19 by cause, by race: Oklahoma 1999-2003 average annual percent
Sources: OSDH Injury Prevention Service and Oklahoma Vital Statistics



Comparing only adolescents ages 15-19, the primary cause of death between racial groups changes slightly. Accidents are still the leading cause of mortality in 60.5% of Whites and 65.6% of Native Americans, but the leading cause of death for African Americans is not disease; rather, it is violence (Figure 44). Violence was responsible for 41.5% of African American deaths between 1999 and 2003. The leading cause of injury deaths in Oklahoma for African Americans age 15-34 is homicide. Between 1999 and 2002, the homicide mortality rate for African Americans age 15-19 was 33.6 per 100,000 and 50.0 per 100,000 population for those age 20-24. Whites of the same age groups had rates of 5.4 and 8.5 per 100,000 population, respectively. This reveals that homicide fatalities are 522.2% higher in African Americans of the younger age group and 488.2% higher in the 20-24 age group when compared to Oklahoma Whites of the same age.

Figure 44. Percent of deaths among teens ages 15-19 by cause, by race: Oklahoma 1999-2003 average annual percent

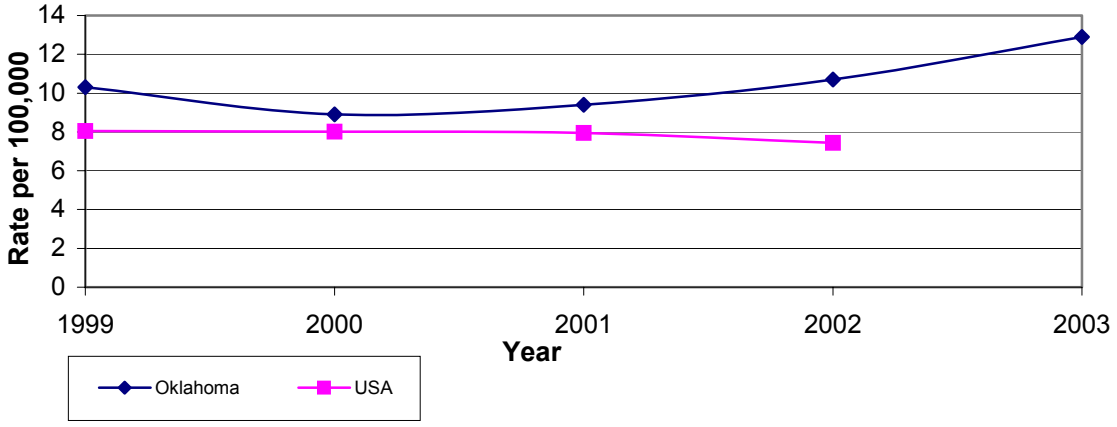
Sources: OSDH Injury Prevention Service, Oklahoma Vital Statistics



In Oklahoma between the years 1999 and 2002, suicide was the second leading cause of injury death combined for all races and both genders for ages 10-34. Suicide was especially predominant for males and in Whites. In 2003, the Oklahoma suicide mortality rate for youth ages 15-19 was 12.9 per 100,000 population. This is a 25.2% increase from 10.3 per 100,000 in 1999 (Figure 45).

Figure 45. Suicide rates among youths ages 15-19 Oklahoma and the U.S. 1999-2003

Sources: OSDH Injury Prevention Service and Oklahoma Vital Statistics

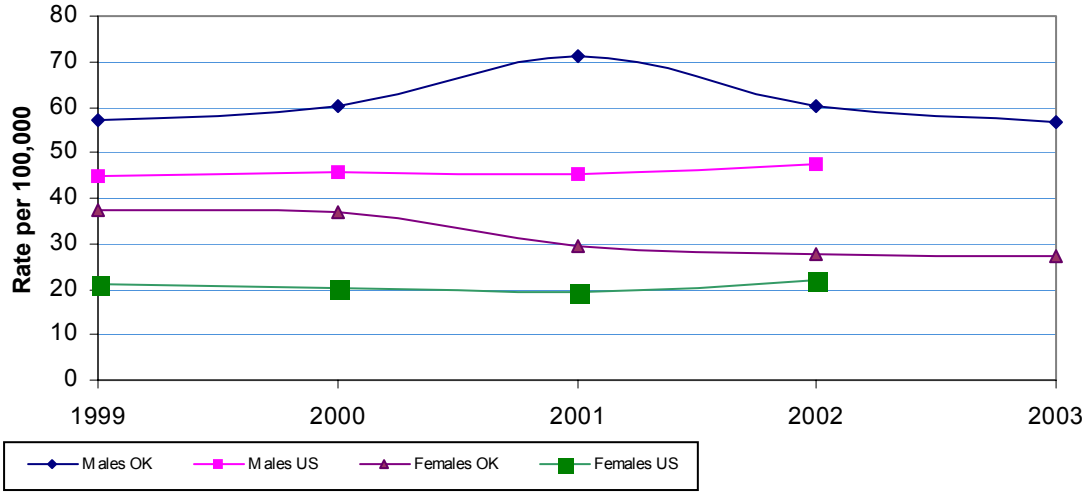


The leading cause of injury death for Oklahomans overall can be attributed to unintentional injuries. It can be seen in Figure 43 for White and Native American populations, accidents made up the majority of deaths in 1999-2003 (60% and 64%, respectively). Unintentional injury mortality rates in the 14 and younger age range declined 25.9% between 1999 and 2003, going from 14.7 to 10.9 per 100,000 population. Although an improvement, Oklahoma is still higher than national averages in this respect. In the 15-19 year old population, the Oklahoma unintentional injury mortality rate declined 11.1% between the years 1999 and 2003. Although there was a decrease, Oklahoma is still well above the national average. In fact, in 2002 Oklahoma was 26.5% above the national unintentional injury mortality rate for the 15-19 age group.

Males 15-19 have a much higher unintentional injury mortality rate than females age 15-19 both nationally and in Oklahoma (Figure 46). In 2002, both Oklahoma male and female unintentional injury mortality rates were 26.4% and 26.6% higher than their respective national rate. Males had a mortality rate of 60.2 per 100,000 (Oklahoma) and 47.6 per 100,000 (national) and females had a mortality rate of 27.6 per 100,000 (Oklahoma) and 21.8 per 100,000 (national).

Figure 46. Unintentional injury mortality rates among youth ages 15-19 by gender: Oklahoma and the U.S. 1999-2003

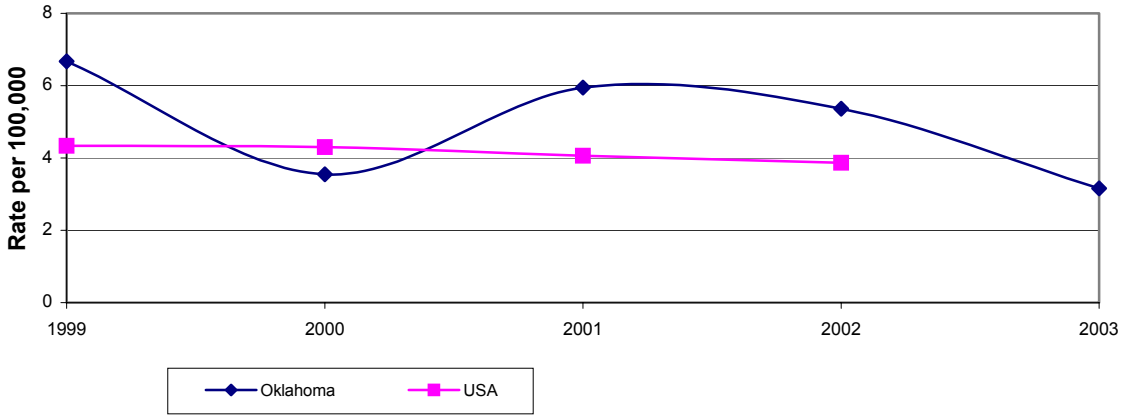
Sources: OSDH Injury Prevention Service and Oklahoma Vital Statistics



Of all unintentional injury deaths, motor vehicle crashes (MVCs) are by far the most prevalent. Unintentional MVC death, specifically, is the leading cause of unintentional injury death in Oklahoma and in the United States. In 2002, MVC mortality rates for Oklahoma children ages 14 and younger were 38.5% higher than the national mortality rate (5.4 and 3.9 per 100,000 population) (Figure 47). However, in 2003 that same age group in Oklahoma had a mortality rate of 3.2 per 100,000.

Figure 47. Unintentional motor vehicle crash mortality rates among children ages 14 and younger: Oklahoma and the U.S. 1999-2003

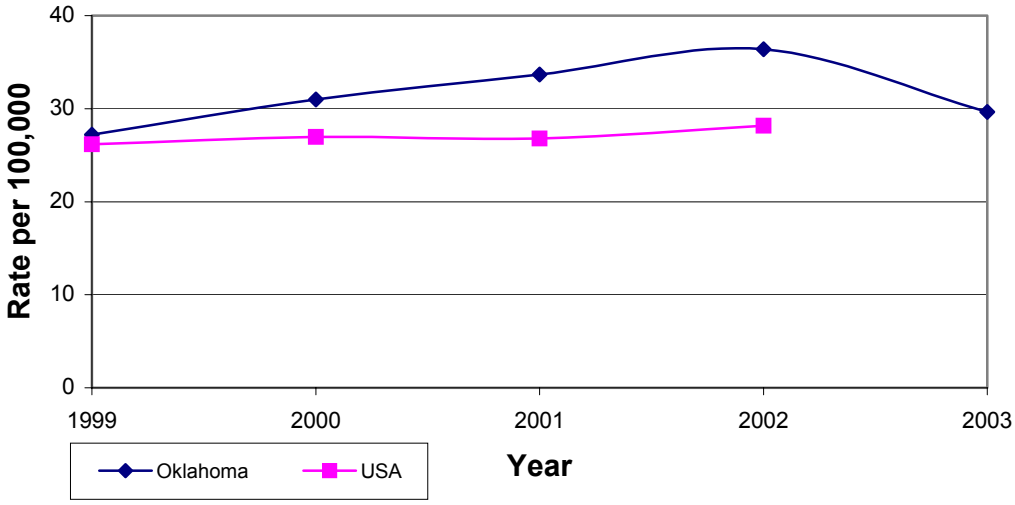
Sources: OSDH Injury Prevention Service and Oklahoma Vital Statistics



Mortality rates for adolescents involved in unintentional MVC's are much higher than the rates for younger children. In 2002, the Oklahoma mortality rate for young adults was 36.4 per 100,000. This was 29.1% higher than the 2002 national mortality rate of 28.2 per 100,000 (Figure 48).

Figure 48. Unintentional Motor Vehicle Crash Mortality Rates Among Youth and Young Adults Ages 15-24, Oklahoma and the U.S. 1999-2003

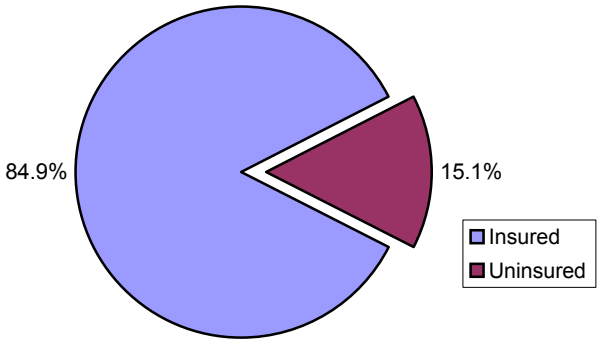
Sources: OSDH Injury Prevention Service and Oklahoma Vital Statistics



Health Care Access:

Having health insurance contributes to a child's overall health. According to the Kaiser Family Foundation, persons with insurance are more likely to seek preventative care, less likely to be hospitalized for preventable problems/diseases and have better follow-up to prescribed treatments. Without insurance many families are forced to pay out-of-pocket for necessary medical care that might have been prevented. In Oklahoma, between 1998-2000, approximately 15.1% of toddlers went without health insurance coverage of any kind, including private, Medicaid, or State Health Insurance Program (SCHIP) expansion coverage (95%CI= 13.1,17.3) (Figure 49). Among those with insurance in 1998-2000, 27.2% had coverage funded by Medicaid (95% CI=24.4, 30.1).

Figure 49. Insurance status of Oklahoma two-year olds
TOTS 1998-2000



According to the Oklahoma First Grade Health Survey 13% of first grade students were uninsured. This number was even higher for fifth graders; approximately 14.3% were without any kind of health insurance (Oklahoma Fifth Grade Health Survey, 2001). The most common barrier for both Oklahoma's first and fifth grade population was the high cost of health insurance coverage.

Immunizations:

In 2002, 70% of Oklahoma 2-year-olds had been immunized. This is 11.4% below the national immunization percentage of 79%. In 2003, 70.5% of 2-year-olds were immunized, which shows that Oklahoma's immunization rates are still in need of improvement. As a comparison, Oklahoma ranked 48th worst in immunization rates for the nation.

Oral Health:

A child's oral health can significantly impact his or her overall health. Studies have shown that children with untreated oral cavities/dental problems have poorer school attendance, greater difficulty paying attention to lessons and problems eating and drinking. In 2003, an oral health screening program, called the Oklahoma Oral Health Needs Assessment, was implemented to determine baseline estimates of dental health status indicators in third graders. The state was broken into six different regions and data were collected, weighted, and summarized.

According to the survey, 37.2% (32.8-41.5 95% CI) of third graders in Oklahoma have received protective sealants on at least one permanent molar tooth (Table 25). The number of sealants per child ranged between 0 and 8 throughout the entire state. The number of children who have received protective sealants varies significantly from region to region.

During the screening, the total caries experience was measured. The overall statewide weighted percentage of third graders who had at least one permanent or primary tooth decayed, missing, or filled was 69.4% (65.1-73.4 95% CI). Active caries, or untreated decay, is another important dental health status indicator in children and 40.2% (35.8-44.7 95%CI) of third graders statewide had untreated decay in at least one permanent or primary tooth in 2003. In primary teeth, a greater number of active caries were observed in the children. Overall, 32.3% of Oklahoma third graders were found to have active caries in at least one primary tooth. Throughout the entire state, 16.4% (13.2-19.9 95% CI) of third grade students were missing one or more of their primary teeth. Overall, 0.6% of third grade students throughout the state of Oklahoma were missing one or more of their permanent teeth. The number of third graders with filled teeth was also observed during the screening process. Those with one or more filled permanent teeth made up 12.6% of the statewide third grade population.

Table 25. Oklahoma third grade oral health status
Oklahoma Oral Health Needs Assessment 2003

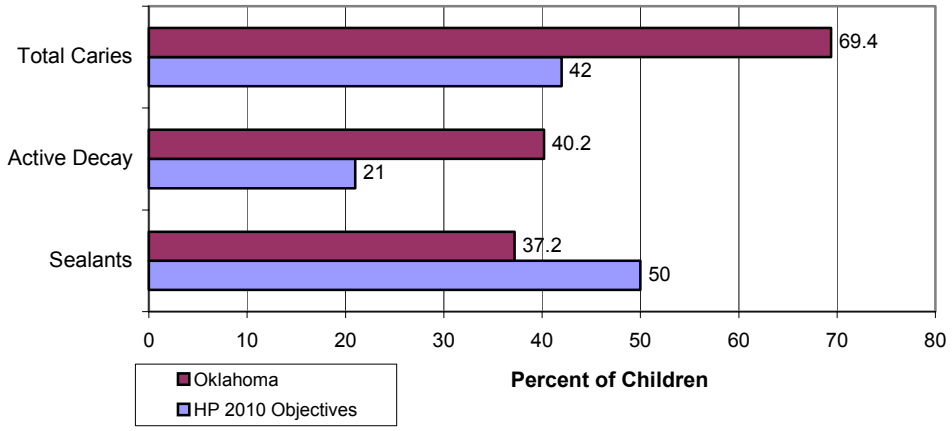
Oral Health Status Indicator	Prevalence	95% Confidence Interval
Percent of children who have received protective sealants on at least one permanent molar tooth	37.2%	32.8, 41.5
Percent of children with dental caries experience	69.4%	65.1, 73.4
Percent of children with untreated decay (active caries) in at least one permanent or primary tooth	40.2%	35.8, 44.7
Percent of children with untreated decay (active caries) in at least one permanent tooth	19.8%	16.4, 23.6
Percent of children with untreated decay (active caries) in at least one primary tooth	32.3%	28.0, 36.4
Percent of children with at least one missing permanent tooth	0.6%	0.1, 1.8
Percent of children with at least one missing primary tooth	16.4%	13.2, 19.9
Percent of children with at least one filled permanent tooth	12.6%	9.7, 15.8
Percent of children with at least one filled primary tooth	40.4%	36.0, 44.9

To gain a better understanding of the current status of oral health in the state of Oklahoma, the data gathered can be compared to the Healthy People 2010 oral health objectives. Oklahoma is 65.2% worse than the HP 2010 objective for total dental caries (Figure 50). It should be mentioned that Oklahoma's rate of 69.4% of children with dental caries was the highest of all states that reported their oral health findings for 2003. The HP 2010 goal for active decay in one or more permanent or primary teeth is 20% of the population. Oklahoma reported 40.2% of the third grade population with active decay in at least one tooth. This number is 91.4% poorer than the objective. Finally, Oklahoma

reported that 37.2% of the statewide third grade population with protective sealants. This fell 25.6% short of the HP 2010 objective of 50%.

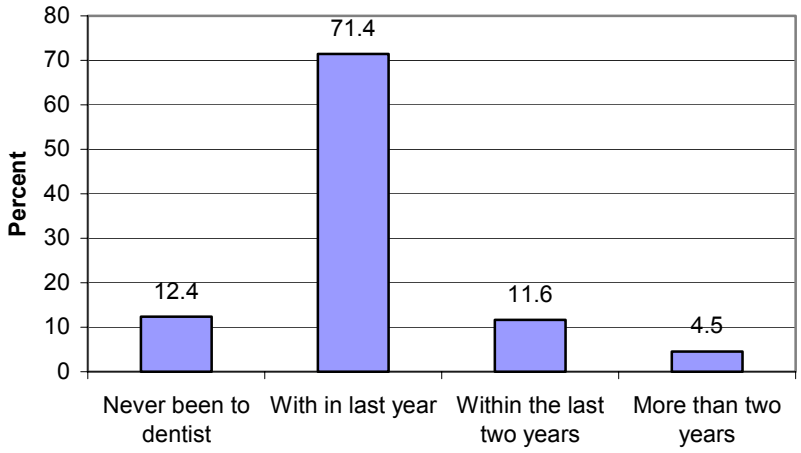
Figure 50. Oklahoma 2003 third grade dental health status vs. Healthy People 2010 Objectives

Source: Oklahoma Oral Health 2003 Needs Assessment



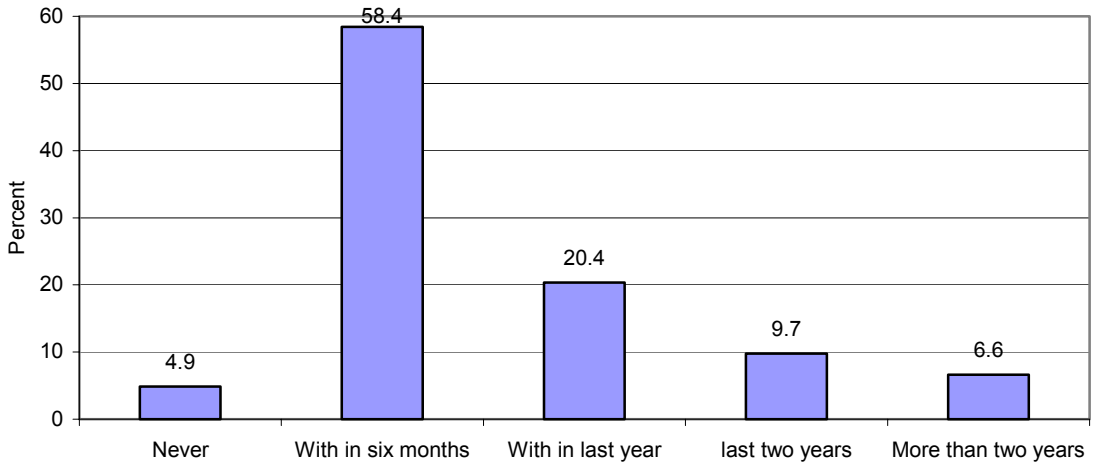
Maintaining good oral health was measured by access to a dental provider on a regular basis. Almost half of Oklahoma first graders have been diagnosed with some type of tooth decay. According to the 2001 Oklahoma First Grade Health Survey, only 71.4% of first graders had seen a dentist within the past year and more than 12% had never been to the dentist (Figure 51).

Figure 51. Timing of last dental visit
Oklahoma First Grade Health Survey 2001



Nearly 59% of fifth graders had seen a dentist within the last six months and 78.8% had seen a dentist within the last year (Figure 52). However 7% of fifth graders had not seen a dentist for more than two years and nearly 5% had never seen a dentist.

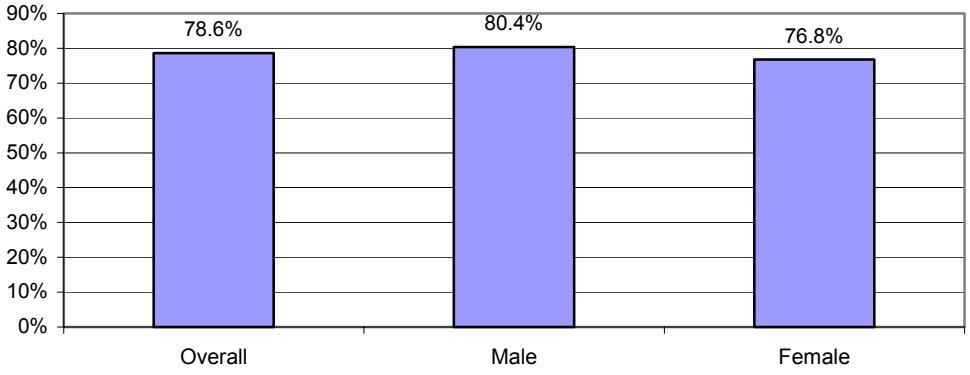
Figure 52. Timing of last dental visit
Oklahoma Fifth Grade Health Survey 2001



Substance Use and Abuse:

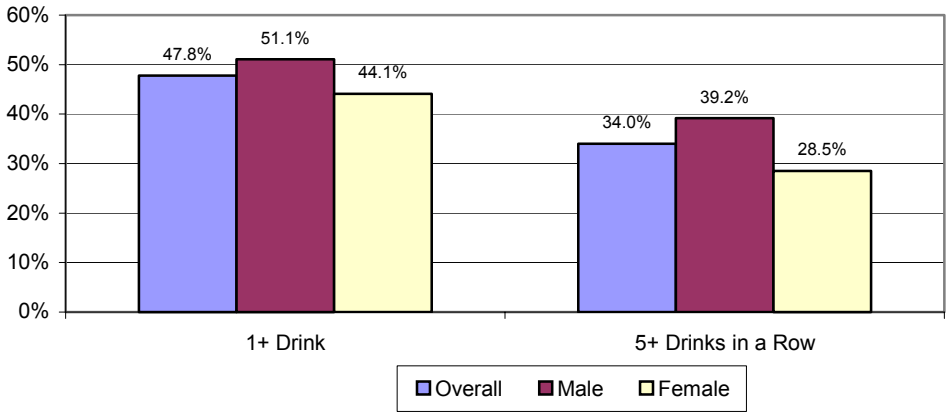
The Oklahoma YRBS also monitors alcohol consumption among high school students. Overall, 78.6% of all high school students in 2003 had at least one drink of alcohol on one or more days during their life (Figure 53).

Figure 53. Percent of high school students who had at least one drink of alcohol during their life, by gender: Oklahoma YRBS 2003



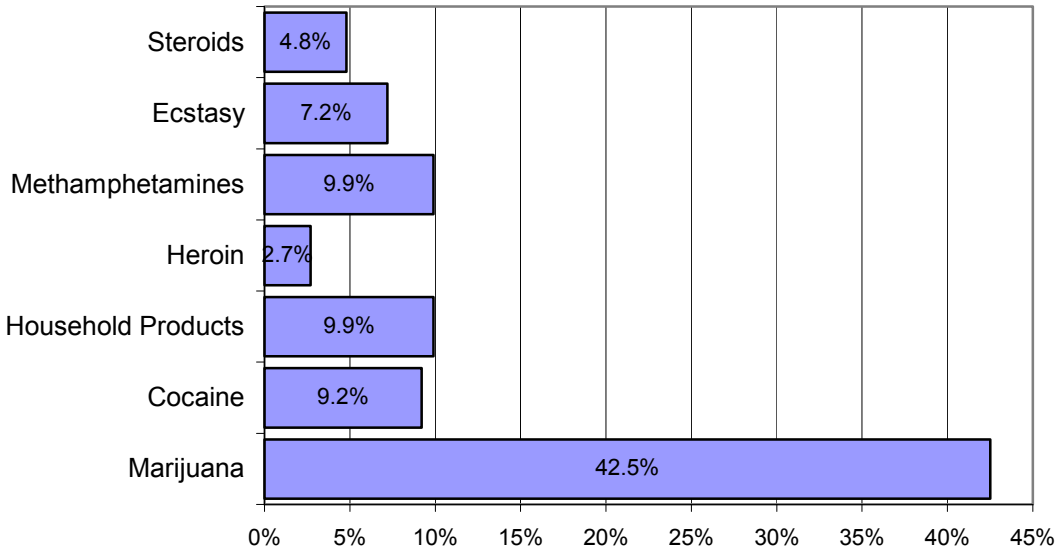
Of those who have had at least one drink of alcohol, 26.8% of those had their first drink before the age of 13, with those 15 or younger at the time showing the highest percentage. Almost one-half (47.8%) of students had at least one drink of alcohol on one or more of the 30 days prior to taking the survey, and 34.0% of those had five or more drinks of alcohol in a row within a couple of hours (Figure 54).

Figure 54. Percent of Oklahoma high school students consuming alcohol within past 30 days, by gender: Oklahoma YRBS 2003



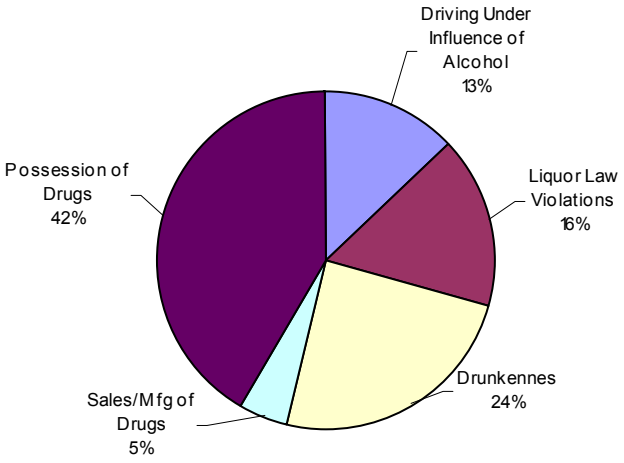
Illegal drugs are also an issue with high school students. For example, 42.5% reported using marijuana one or more times during their lifetime. Of those who had tried it, 11.1% used it for the first time before the age of 13. Twenty-two percent of Oklahoma students said that they used marijuana one or more times during the past 30 days. As for other drugs, 9.2% of students reported trying cocaine, 9.9% reported inhaling some sort of household product to get high, 2.7% had used heroin, 9.9% reported using methamphetamines, and 7.2% had taken ecstasy one or more times during their lifetime (Figure 55). Almost a quarter (22.2%) of students said that they were offered, sold, or given an illegal drug on school property by someone within the past year.

Figure 55. Percentage of Oklahoma high school students who have ever used an illegal substance, by type: Oklahoma YRBS 2003



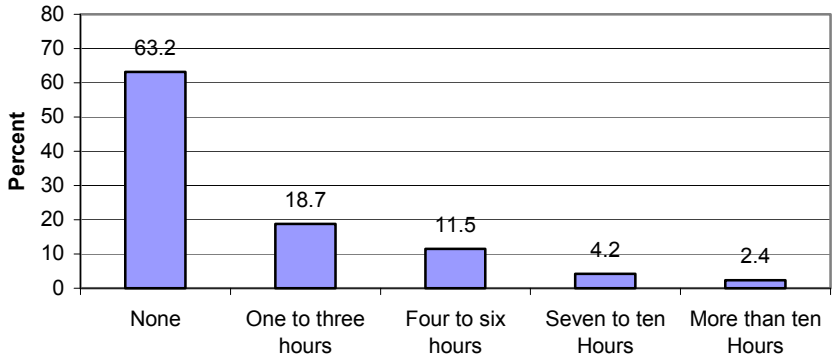
Drugs and alcohol contribute to a number of youth (ages 15-17) arrests in Oklahoma. Each year, almost two thousand arrests are made involving people ages 15 through 17 related to driving under the influence of alcohol, drunkenness or violating liquor laws. Drug arrests, which include possession and manufacturing/sales, are also seen in this age group. Most (82.6%) of drug possession arrests for youth ages 15-17 involved marijuana, and marijuana also represented 53.2% of manufacturing/sales arrests (not shown). As Figure 56 shows, alcohol-related offenses made up just over half (53.8%) of the average number of drug and alcohol arrests between 2000 and 2002 for older teens. Possession of drugs made up the biggest percentage of teen drug/alcohol arrests at 41.6%.

Figure 56. Percent of alcohol and drug arrests among Oklahoma teens ages 15-17 by type of charge: 2000-2002 average annual percent
Source: Oklahoma Kids Count 2004



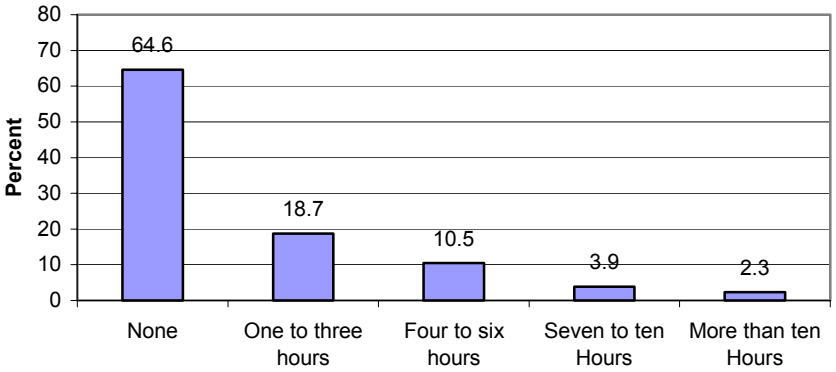
Tobacco Exposure and Use:
Second hand smoke exposure contributes to symptoms of respiratory irritation like cough, excess phlegm, wheezing and reduced lung function. Exacerbation of asthma has been linked to second hand smoke exposure among young children and adults. Research also shows that children exposed to tobacco smoke are more likely to contract pneumonia or bronchitis. According to TOTS data, 31.8% of two-year-olds in Oklahoma have one hour or more of smoke exposure per day (95% CI = 29.1, 34.6). Approximately one-third of Oklahoma first graders spend more than one hour each day in the presence of second hand tobacco smoke (Figure 57) and almost one in five (18.1%) spend four or more hours in the presence of tobacco.

Figure 57: Second hand tobacco smoke exposure per day among first grade students: Oklahoma First Grade Health Survey 2001



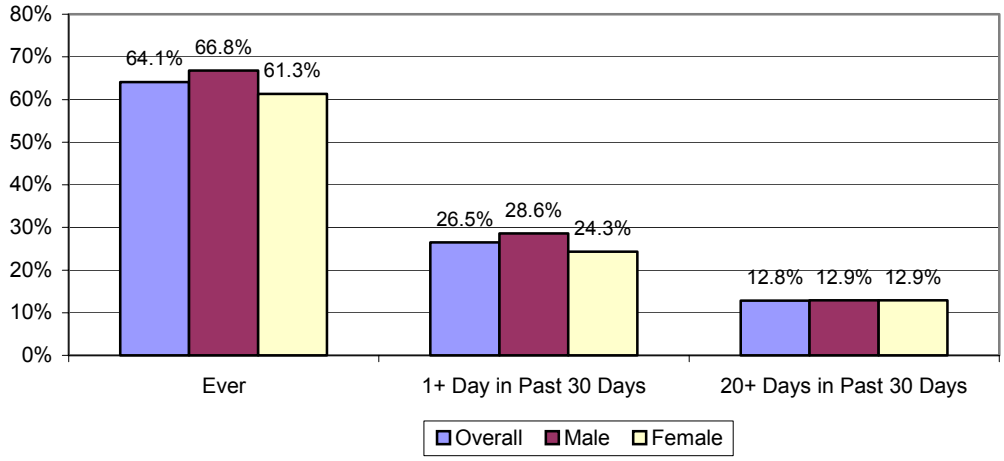
Nearly one in five (18.7%) fifth graders are exposed to smoke for one to three hours on average (Figure 58). Almost as many (16.7%) were exposed to smoke for more than four hours per day on average.

Figure 58: Second hand tobacco smoke exposure per day among fifth grade students: Oklahoma Fifth Grade Health Survey 2001



According to the 2003 YRBS survey, 64.1% of high school students tried smoking a cigarette, even if only for one or two puffs (Figure 59). Slightly less than one-fourth (23.7%) of the students had smoked a whole cigarette for the first time before the age of 13. The percentage of students who smoked cigarettes on one or more of the past 30 days was 26.5%. One in eight (12.8%) high school students smoked cigarettes on 20 or more of the past 30 days. With respect to how much these students smoked per day, 18.5% smoked two or more cigarettes per day on the days they smoked during the past 30 days, and 2.8% smoked more than 10 cigarettes on the days they smoked. The total percentage of students who had ever smoked one or more cigarettes daily for a period of 30 days was 17.5%.

Figure 59. Percent of high school students smoking cigarettes, by smoking frequency: Oklahoma YRBS 2003



With respect to smoking and cessation efforts, 54.8% of current smokers reported trying to quit smoking during the previous year, but were apparently still smoking at the time of the survey. There is a large gender difference between students who used chewing tobacco in 2003. Overall, 12.7% of students used chewing tobacco, snuff, or dip on one or more of the 30 days prior to the survey. Analyzing this by gender, 23.0% of males used chewing tobacco and only 1.7% of females reported using chewing tobacco. The same gender difference can be found in those students who smoked cigars, cigarillos, or little cigars. One-fourth (24.7%) of males reported using them within the 30 days before the survey and in contrast to one-tenth (9.6%) of females. When it comes to use of any tobacco product during the 30 days prior to the survey, 34.1% of high school students reported using at least one type of tobacco. There is a significant gender difference with 42.1% of males and 25.9% of females reporting using tobacco.

Obesity, Overweight, and Nutrition:

Obesity and overweight among children and adolescents is becoming more prevalent in the United States as well as in Oklahoma. The increase in overweight in the past 20 years has been linked to a variety of probable causes including higher levels of sedentary activities, lower physical activity levels, and poorer eating habits.

The Surgeon General recommends that all Americans participate in physical activity for at least 30 minutes per day on most days. The majority (52.9%) of first graders in Oklahoma spend time either before or after school watching TV, playing video games or using a computer (Figure 60). Parents of first graders were also asked how much time their child spent each day doing some type of physical activity such as riding his/her bike, running, playing soccer, playing kickball, or some similar activity. Most first graders (69.6%) spent an hour or more doing these activities. Parents were asked how many days in a week their child did these activities so vigorously for twenty minutes or more that they sweated. Approximately one-half (53.5%) responded that their child did so for five or more days per week. However, almost one in ten first graders (9.4%) reported one day or less of vigorous activity per week (Table 26).

Figure 60: Days spent on sedentary activities during school week among first grade students: Oklahoma First Grade Health Survey 2001

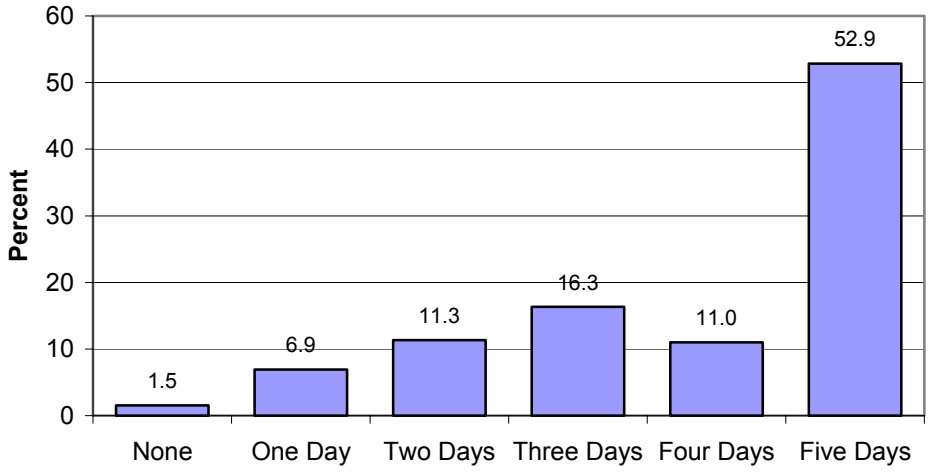


Table 26. Time per day spent on vigorous physical activity for 20+ minutes among first grade students: Oklahoma First Grade Health Survey 2001

Amount of Time	Percent of Students
None	0.5
Less than 30 min	4.1
30min to 1 hr	25.8
1+ hrs	69.6

More than half of the fifth graders engage in less than 2 hours of activity in watching T.V, playing video games or using a computer per day. Approximately 38% engage in the sedentary activities for two to four hours in a day. Some students (6.3%) spend more than four hours per day doing sedentary activities (Figure 61). More than 50% of the fifth graders surveyed participate in physical activity for more than one hour each day and approximately 34% are active for 30 minutes to an hour each day. However, 11.7% of children participate for less than 30 minutes per day, corresponding to more than one in ten Oklahoma fifth graders not achieving the recommended levels of physical activity in a day (Figure 62). More than a quarter of youth (27.5%) do not participate in vigorous activity more than 2 days per week.

Figure 61: Average time spent each day on sedentary activities among fifth grade students: Oklahoma Fifth Grade Health Survey 2001

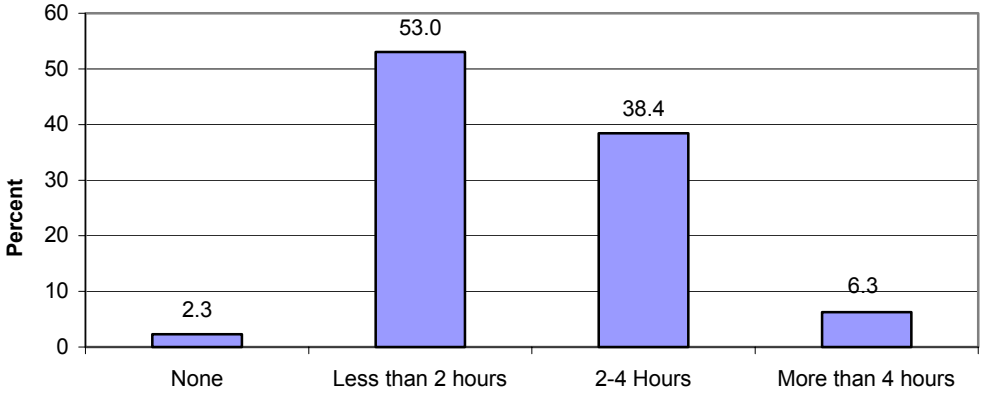
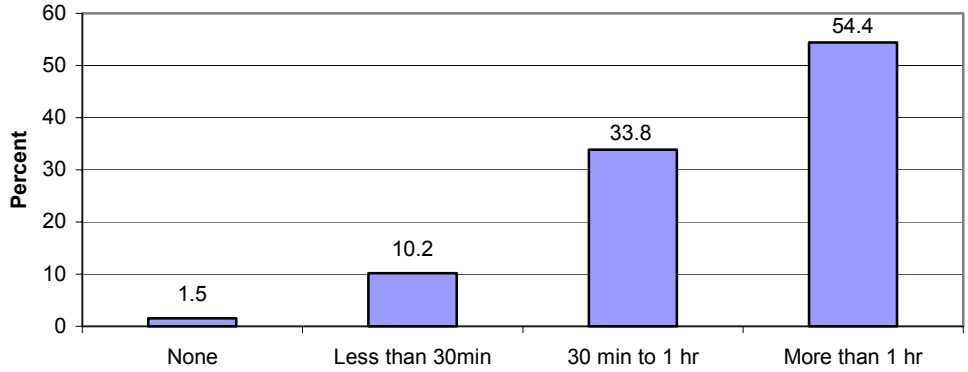


Figure 62: Average time spent each day on vigorous physical activities among Fifth Grade Students: Oklahoma Fifth Grade Health Survey 2001

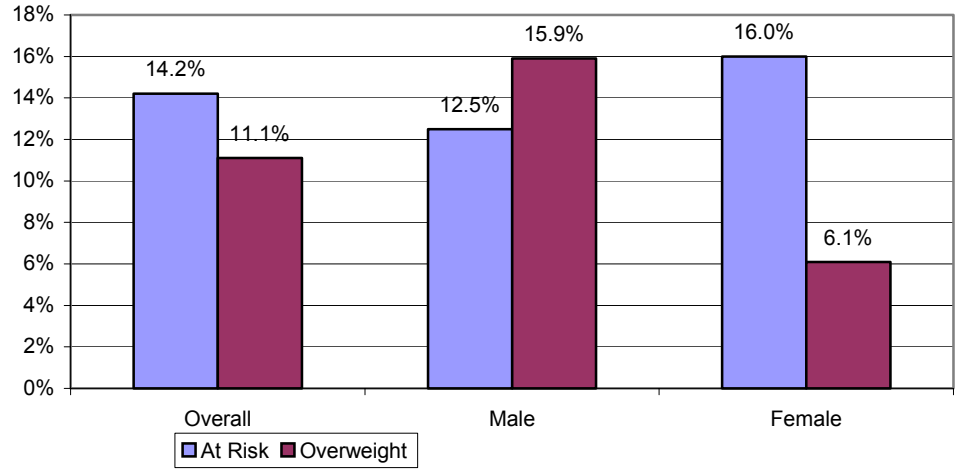


Nutrition is key to understanding obesity and overweight among young children. Only 27% of the fifth graders ate the USDA recommended five servings of fruits and vegetables every day. According to Fifth Grade Health Survey results, most parents do have rules on the types of snacks their children can eat during the day, but a significant number (32.5%) do not.

In 2003, 11.1% of the Oklahoma high school population was considered to be overweight. This included students who were at or above the 95th percentile for body mass index by age and sex based on reference data from the National Health and Nutrition Examination Survey I. High school males were found to be overweight more than females (15.9% vs. 6.1%, respectively). The age group with the largest percentage of overweight students was those 15 and under (21.0% were overweight). These are interesting numbers because, overall, 30.7% of high school students think of themselves

as overweight. As for those students who were at risk for becoming overweight, 12.5% of high school males and 16.0% of females fall into this category (Figure 63). It should be mentioned that being 'at risk' as a high school students is equivalent to being overweight as an adult and that being 'overweight' as a high school student is equivalent to being obese as an adult.

Figure 63. Percent of high school students overweight or at risk for becoming overweight*, by gender: Oklahoma YRBS 2003



**Body mass index (BMI) standards for children and youth:*
85% - <95% Percentile = At risk for becoming overweight
95% percentile & higher = Overweight

Oklahoma is approximately 20% below (37%) the national average (55%) for students who enrolled in physical activity classes (PE) in an average school week. And while 64% of all Oklahoma students do vigorous exercises at least 3 days a week, Oklahoma females do vigorous exercises 20% less than their male counterparts. However, females are most likely to be dieting to lose weight when compared to their male counterparts.

Forty-four percent of students were trying to lose weight at the time of the survey. Female students are most likely to try to lose weight regardless of weight category; 29.4% of males were trying to lose weight, compared to 60.1% of females. The percentage of students who ate less food, fewer calories, or foods low in fat to lose weight or to keep from gaining weight during the past 30 days was 42.6%. Again, there was a significantly higher percentage of females (57.3%) who did this compared to males (28.4%). Females overall had higher percentages than males when it came to not eating, taking diet pills, exercise, and resorting to vomiting or taking laxatives in order to lose weight.

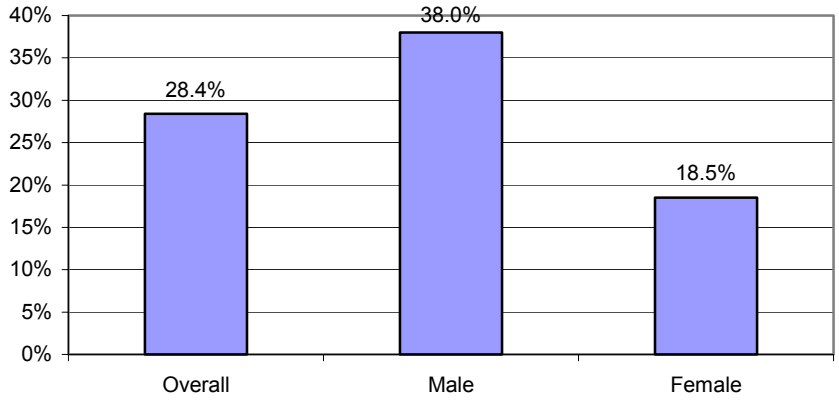
As far as general eating habits, only 14% of Oklahoma students ate five servings of fruits and vegetables a day in the week prior to taking the survey, compared to 22% nationally. Also, Oklahoma females are almost half (6%) as likely to drink three or more glasses of milk in a week than the national survey reports (11%), while Oklahoma males say that

they are three times more likely to drink milk than Oklahoma females (19%). However, when looking at males who drink milk by grade, the numbers decrease accordingly; 23% of ninth grade males drink milk three times a week while only 8% of 12th grade males do.

Violence:

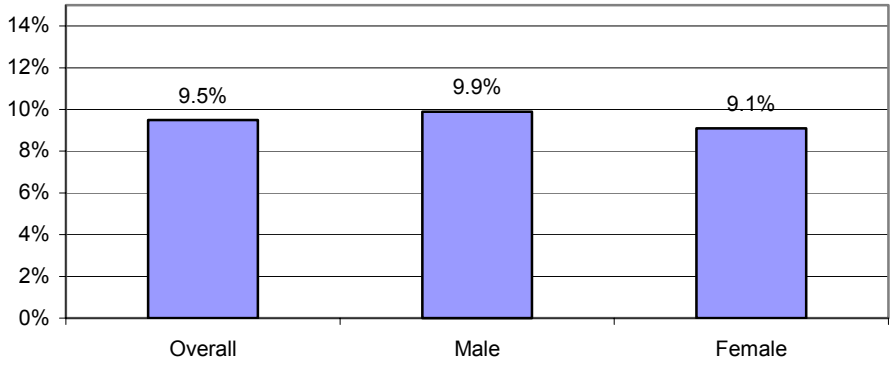
Violence-related behaviors were examined in the 2003 YRBS. Males consistently had higher rates of violence-related behaviors than females; 37.5% of male students carried a weapon such as a gun, knife, or club on one or more of the previous 30 days, as opposed to 5.8% of females. Almost 1 in 10 males carried a weapon to school on at least one occasion. Over 13 percent of males carried a weapon on school property compared to less than three percent of females. Over seven percent (7.4%) of Oklahoma high school students had been threatened or injured with a weapon such as a gun, knife, or club on school property one or more times during the previous 12 months. Males were more likely to have been in a physical fight; 38% were involved one or more times within the past year, and 4.8% were injured and had to be treated by a doctor or nurse (Figure 64). Though less frequently than males, a surprising 18.5% of high school females were involved in a physical fight, but only 1.4% needed a doctor's or nurse's attention.

Figure 64. Percent of high school students who were in a physical fight one or more times during the past year, by gender: Oklahoma YRBS 2003



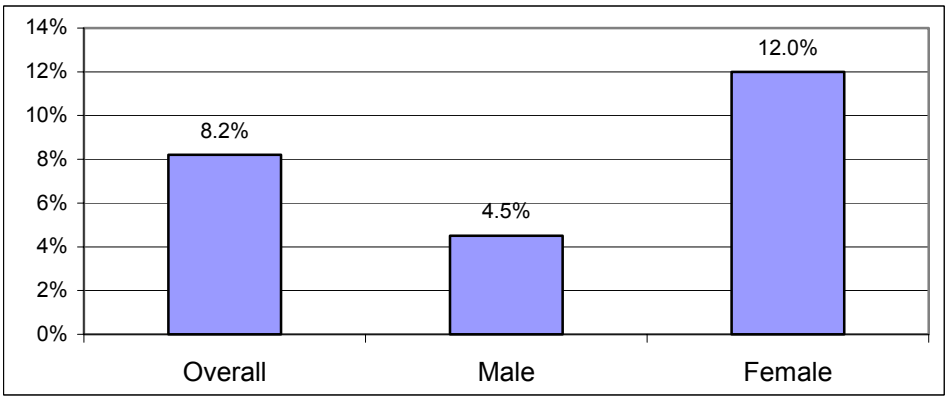
Dating violence also emerges as an issue for high school youth in Oklahoma. Overall, 9.5% of students reported being hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months (figure 65). Within this category, males reported a higher incidence of being physically hurt than females.

Figure 65. Percent of high school students physically hurt intentionally by their boyfriend or girlfriend within the past year: Oklahoma YRBS 2003



Females report a high percentage of being physically forced to have sexual intercourse; more than one in ten Oklahoma high school girls have been sexually assaulted in their lifetime (Figure 66). The problem is prevalent with boys as well, although at a smaller rate; 4.5% of males report being forced to have intercourse.

Figure 66. Percent of high school students forced to have unwanted sexual intercourse: Oklahoma YRBS 2003

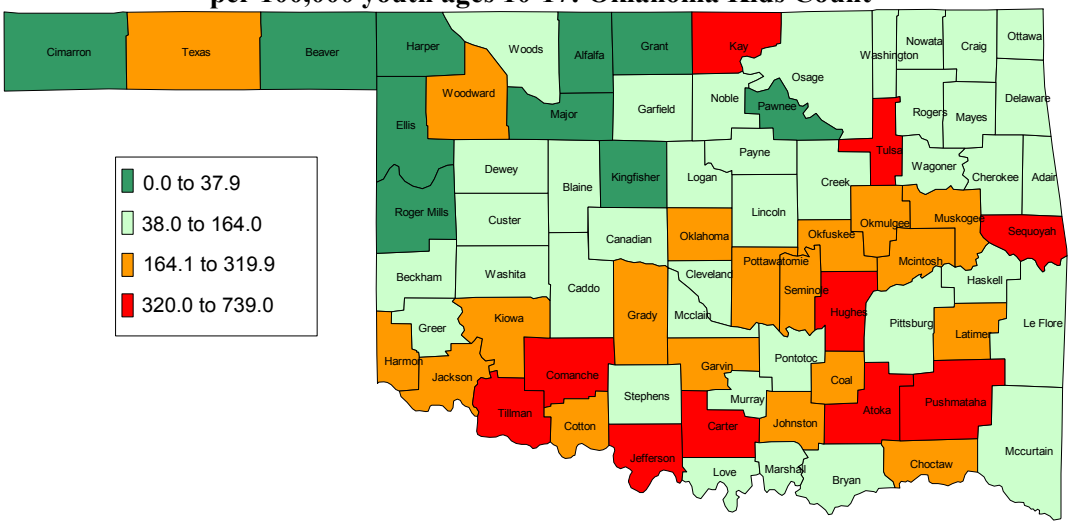


Violent crime arrests are another concern among teens ages 15-17. It has been observed that children in certain situations are at an increased risk of involving themselves in violent criminal activity than others. These include boys born to teenage mothers, children of parents who never completed high school, and children who are doing poorly in school. Victims of child abuse and/or neglect are more prone to be involved in violent crimes or prostitution. In addition to this, poor children are more likely than non-poor children to be victimized by violent crime and later become perpetrators themselves. When assessing the three-year period of 2000-2002, it is seen that juvenile violent crimes were slightly down from the previous three-year period. Between 2000 and 2002, around one thousand youths age 10-17 were arrested each year for committing violent crimes. Males made up 80.4% of those who committed these crimes. Whites comprise the

majority of juvenile violent crime arrests (58.2%), but minorities, who make up 21.8% of the total population, committed 41.8% of the violent crimes between 2000 and 2002.

When the 2000-2002 Oklahoma juvenile violent crime arrests are analyzed by county, it can be seen that there are a number of counties that show the lowest and best rate of 0.0 per 100,000 youths ages 10-17 (Figure 67). Those counties are Alfalfa, Beaver, Cimarron, Ellis, Grant, Harper, and Roger Mills. However, this may be due to smaller numbers of teens living in those counties since they are among the least populated counties in the state. Jefferson County has one of the highest rates at 738.7 arrests per 100,000 youths. The county juvenile violent crime arrest average was 164.1 per 100,000 youths, and the state rate was 246.7 per 100,000 youths ages 10-17. The corresponding national violent crime arrest rate from 2000 to 2002 was 394 per 100,000 youths ages 10-17, indicating that Oklahoma was 37.4% below the national rate.

Figure 67. Three-year (2000-2003) rate of juvenile violent crime arrests per 100,000 youth ages 10-17: Oklahoma Kids Count



<u>High School Dropouts:</u>

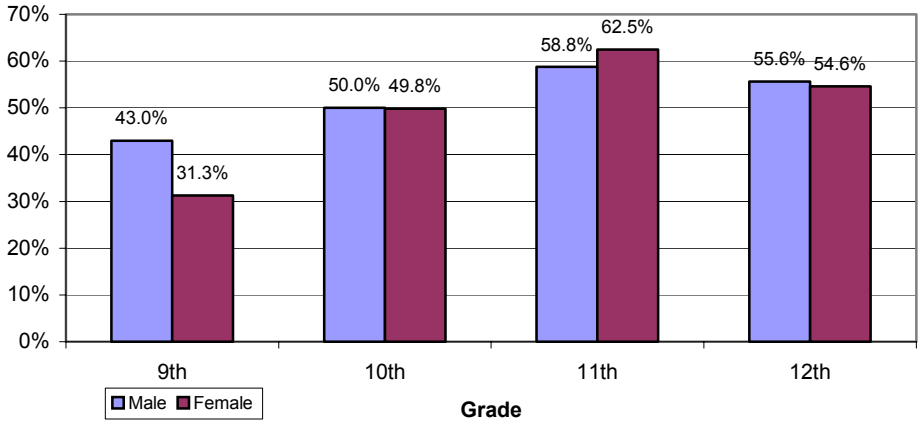
At the end of the 2002/2003 school year, Oklahoma ranked 24th in the nation in number of high school dropouts. A two-year average of School Year (SY) 2001/2002 and SY 2002/2003 shows that 3.8% of the high school population dropped out. The most common age to drop out of high school was 17 and the most common grade for a student to drop out of was the tenth. This is a serious problem, because unemployment rates for high school dropouts are twice as high when they are adults compared to their graduated counterparts. Dropping out of school can also lead to unfavorable living conditions, such as poverty due to diminished employment opportunities and poor earning ability. In some cases, it can lead to a higher possibility of criminal involvement. The effect may be intergenerational as well; the children of high school dropouts are at a higher risk of becoming high school dropouts themselves than the children of high school graduates. In the SY 2001/2002 and SY 2002/2003 average, 53.9% of dropouts are male and 46.1% are female (source: Oklahoma Kids Count). In addition, although Whites comprise the majority of dropouts, minorities such as African Americans and Native Americans have disproportionately higher drop out rates. The two-year county dropout average was 3.0%

of those who started school and did not finish. The county that had the worst, or highest, dropout percentages was Pushmataha County with an average of 5.4% of its high school students dropping out over those two years. The lowest, or best, dropout percentage was found in Alfalfa County with an average of 0.2% of its high school students dropping out during the studied time period.

Sexual Practices and Behaviors:

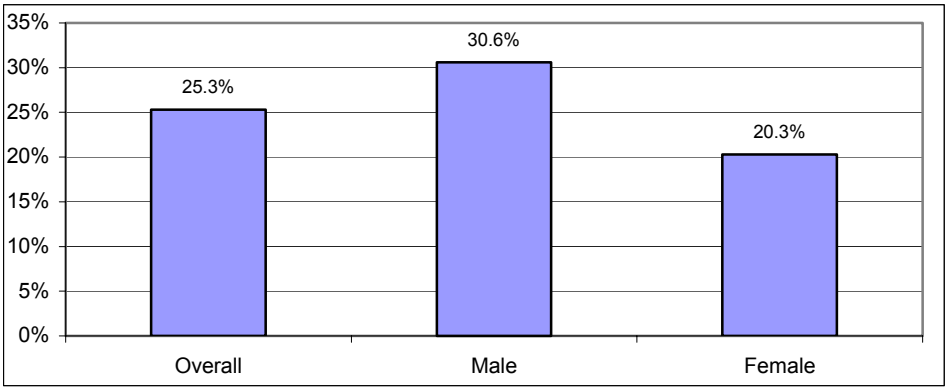
Fifteen was the most common age given by high school students for having sexual intercourse for the first time. It appears that girls start having intercourse somewhat later than boys but by the 12th grade the rates become similar (Figure 68). Some males start very early; 13.1% of ninth grade males reported having sexual intercourse for the first time before the age of 13.

Figure 68. Percent of High School Students Who Have Ever Had Sexual Intercourse, By Gender, By Grade: Oklahoma YRBS 2003



Many youth have had multiple partners; 18.5% of males reported having sexual intercourse with four or more people during their lifetime. More than a third of Oklahoma's high school population reported having sexual intercourse with one or more people during the previous three months. In addition, 38.0% of high school females reported having sexual intercourse during the previous three months. Of those who had had sexual intercourse during the previous three months, 25.3% drank alcohol or used drugs beforehand (Figure 69). Males had a much higher rate of using drugs or alcohol prior to their last sexual encounter. Only two-thirds of sexually active teens in Oklahoma reported using a condom during the last three months. More specifically, 67.2% of males and 61.2% of females reported condom use.

Figure 69. Percent of high school students drinking alcohol or using drugs before last sexual intercourse, by gender: Oklahoma YRBS 2003



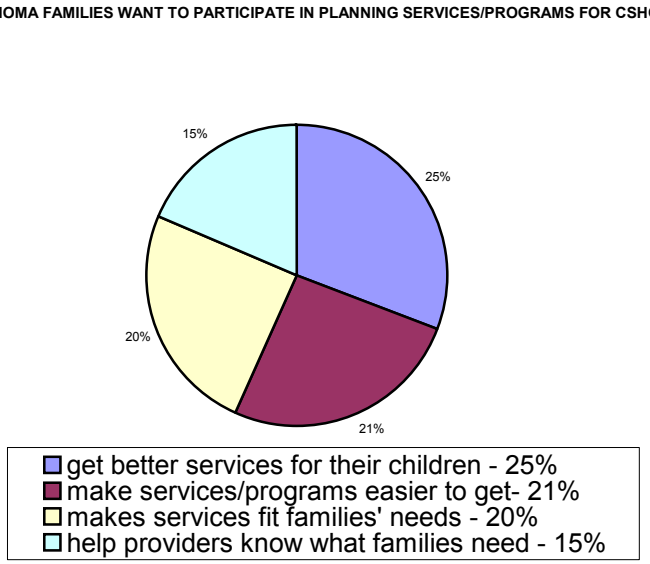
Assessment of Children with Special Health Care Needs

Children with special health care needs are described by MCHB as "children who have or are at risk for chronic physical, developmental, behavioral or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally". Statistics from the 2001 National Survey of Children with Special Health Care Needs (NSCSHCN) estimate the number of self-reported children with special health care needs in Oklahoma to be 129,858, which is 14.5% of the state's population ages 0-17. This is slightly more than the national average of 12.8%.

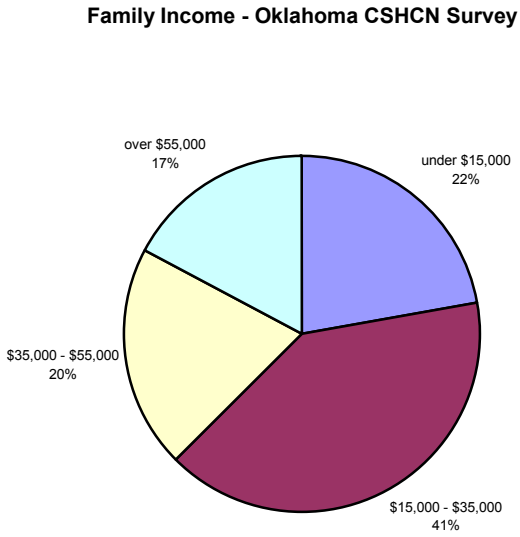
Statistics from the Office of Policy, Planning and Research (OPPR) with the Oklahoma Department of Human Services showed that in December 2004 there were 10,780 persons under age 20 receiving a State Supplemental Payment (SSP) for the Disabled and Medicaid benefits. In March 2005 there were 3,675 children under age 18 receiving services through the Developmental Disabilities Services Division (DDSD), however some of them also received SSP and Medicaid.

National Priorities

Families Partner in Decision Making – The 2001 NSCSHCN reported that almost 12% of parents nationwide felt they needed professional assistance coordinating their children's care. In 2005 Oklahoma's CSHCN program conducted a survey entitled "Family Preferences for Partnering with Providers in Planning, Developing, Implementing and Evaluating Services" through funding from an incentive award through the Champions for Progress Center. The results from this survey indicated that 46% of families stated they want to be a part of planning services and programs for their children with special health care needs to get make programs/services easier to get (21%) and to get better services (25%). Twenty percent of families stated they want to make services fit the families' needs and 15% stated they want to help providers know what families need.



Another report from this survey showed 37% of CSHCN families have incomes over $35,000. Twenty-two percent of families reported their income was under $15,000 and the other 41% reported incomes between $15,000 and $35,000. As stated previously, the 2003 per capita income for the state was $26,719, so the majority of families responding to this survey represented families with higher incomes.



The 2001 NSCSHCN reported that 33.0% of Oklahoma's children with special health care needs did not have family-centered care, which was comparable to the national average. In the Oklahoma CSHCN survey done in 2004, families indicated they need to

believe that provider systems will listen to their ideas before they expend the time and energy to participate, and they need a family who has prior experience to mentor them early in the process.

Medical Home – A medical home, as defined by the American Academy of Pediatricians, is primary care that is accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective. The National Survey on Children's Health, done in 2003 and sponsored by MCHB, reported that 41.5% of Oklahoma's children ages 0-17 received health care within a medical home. For the nation the survey found that 46.5% of children received health care within a medical home. The 2001 NSCSHCN reported that 14.4% of Oklahoma's children with special health care needs did not have a personal doctor or nurse, and 11.9% of the CSHCN population in Oklahoma relied on the emergency room for medical care, compared to 9.3% of the nation's CSHCN population.

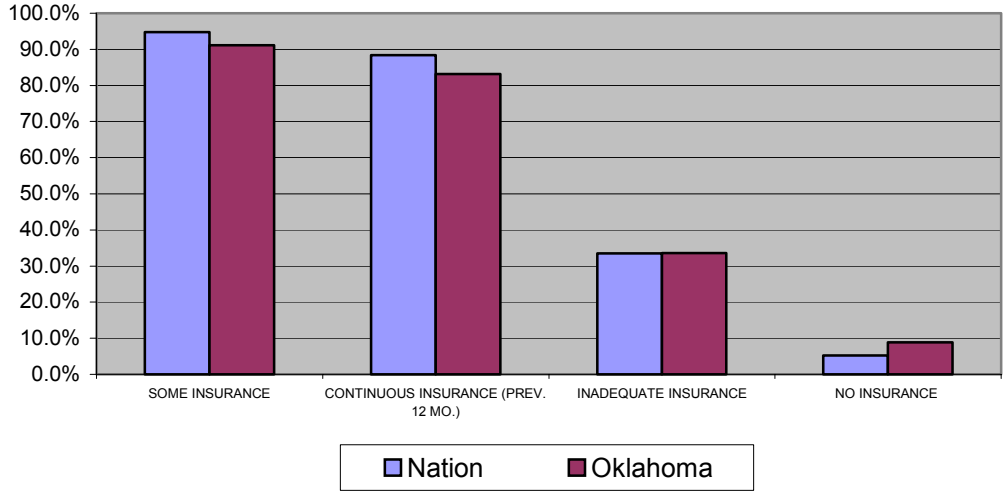
Children and youth in foster care have a high prevalence of chronic medical, dental, mental health, developmental, and educational needs. OPPR reported there were 6,849 in foster care in December 2004. An AAP task force identified several issues that may influence the availability of primary care providers in the community from providing comprehensive care for foster care children. Providers must be prepared to devote significantly more time to their encounters with foster care children and providers must provide considerable care coordination to ensure that information flows between specialists, social services, and the providers.

Adequate Insurance – The 2003 NSCH showed that 91.2% of the nation's children age 0-17 currently have health insurance coverage, compared to 88.3% of Oklahoma's children. Eighty-three percent of the nation's children had consistent health insurance over the past twelve months, compared to 79.6% of Oklahoma's children.

Statistics gathered by the Oklahoma Health Care Authority show that in 2004, 458,390 children under the age of 19 were receiving Medicaid benefits at some time during the year. Using the 2001 NSCSHCN statistic that 14.5% of the population represents children with special health care needs, the estimated number of CSHCN receiving Medicaid benefits would be approximately 66,466.

For children with special health care needs, the 2001 NSCSHCN showed that 94.8% of CSHCN nationwide had some type of health insurance, compared with 91.1% of Oklahoma's CSHCN population. This is somewhat higher than insurance coverage for children in general. With the Oklahoma CSHCN survey also showing that the majority of Oklahoma CSHCN families had above average incomes, the fact that CSHCN families in general have insurance coverage bears out this statistic. The 2001 NSCSHCN showed that 88.4% of children with special health care needs across the nation had continuous insurance coverage over the previous twelve months, compared with 83.2% of Oklahoma's children with special health care needs.

INSURANCE COVERAGE FOR CSHCN



Unfortunately only 66.5% of families felt their insurance was adequate to meet their needs. As expected, a higher percentage of children in families with low incomes reported inadequate coverage. One of the reasons for this is lower income households must rely on public insurance coverage which historically does not cover the many specialized services which children with special health care needs require. For the CSHCN population in Oklahoma on Medicaid who live in rural areas of the state, this is a large problem because there are so few providers of specialty care who accept payment from Medicaid.

The Oklahoma Health Care Authority maintains case management services for approximately 211 institutionalized children who require skilled level of care. With the implementation of the Tax Equity and Fiscal Responsibility Act (TEFRA) in Oklahoma, children who are ineligible for SSI due to parent's income or resources can be approved for Medicaid counting only the child's income and resources, if the child meets nursing home, nursing home for the mentally retarded or hospital level of care. Children approved for TEFRA must remain in their own homes to receive services. OHCA reports Because TEFRA-eligible children have higher incomes, this program will add more CSHCN to the Medicaid rolls.

Of the 4,000 individuals on the waiting list for services under the OKDHS Developmental Disability Services Division's (DDSD) Medicaid home and community-based waivered services program, 1,400 individuals are under age 21. Of this number, 809 individuals receive only the medical services they can purchase with their own or their caretaker's resources and the rest receive Medicaid.

In Oklahoma's current Medicaid system, there is not a mechanism for providers to be reimbursed for the extra time required to provide direct clinical services to children and

youth in foster care, nor is there a way for them to be reimbursed for the desperately needed care coordination.

Community-Based Systems/Access to Care - The 2001 NSCSHCN showed that 22.0% of families in Oklahoma reported their child with special health care needs had some unmet need for specific health care services, compared to 17.7% of children nationwide. SoonerCare, Oklahoma's Medicaid and SCHIP program, maintains a helpline that people enrolled in the program can call if they have questions. In FY 2005 the helpline reported 1,300 calls regarding individuals less than 21 years of age who had access to care issues, with 405 of the calls dealing specifically with lack of access to care for children in the rural areas of the state. This is a significant issue since over two-thirds of Oklahoma's population lives in rural areas of the state.

In the Oklahoma CSHCN survey, families responding to "how do you usually get information about services?" reported a broad range of methods. While some thought it was "dumb luck", others listed "support groups", or "service providers"; but most often it was personal "research." The predominant response indicated that families relied on their own capacity or that of other families. "Other families" was selected 29% of the time as was "computer or internet" resulting in nearly 60% of families saying they get information about services on their own or with the help of other families.

In answer to the question "why do you think you were denied services for which you felt your child was eligible" on the Oklahoma CSHCN survey, some of those responses indicated "scarcity of services", such as "neurologist – waiting three years" and "had to get own OT due to SoonerStart being without services". (SoonerStart is one of Oklahoma's early intervention programs.) Others indicated financial restrictions regarding payment for services and "financial support for mental health services not covered by private insurance". Speech-Language therapy was listed most often in response to the question asking for the top three services needed for their children, followed closely by occupational and physical therapy.

In 2005, Lynn Jeffries, PT, PHD, PCS, with the Lee Mitchener Tolbert Center for Developmental Disabilities at the University of Oklahoma Health Sciences Center, conducted a survey of OKDHS licensed childcare centers and homes in Oklahoma. The survey found that 50% of childcare centers and 27% of childcare homes included children with disabilities. One of the services offered by OKDHS is a childcare subsidy that helps eligible families pay for childcare services. In this survey childcare providers stated that the families of 541 children reported requesting that OKDHS pay the special needs rate for their children (but this only represented the population that responded to the survey). The special needs rate is an amount paid to childcare providers which is in addition to the rate paid for a typical child of the same age. OPPR reported that in 2004 an average of 522 children were authorized for the special needs rate each month.

Transition – Oklahoma does not have data on transition services. CSHCN is represented on the newly formed Oklahoma State Transition Committee whose goal is to gather data on transition services across the state. The 22 members of this committee represent 13

different agencies. OASIS, the Oklahoma Areawide Services Information System, works with CSHCN to improve their data bank on transition services. CSHCN is working with its contractors to help them recognize that the services they provide are a part of the overall transition plan that is a part of every CSHCN individual's life.

Another project that has information that was helpful in the overall needs assessment was the Healthy and Ready to Work Program. This program works with sickle cell individuals on transitioning from pediatric providers to adult based care. Although their overall numbers were very low, it did show that there is an ongoing need for to work with the CSHCN population on transition issues.

4. Examine MCH Program Capacity by Pyramid Levels

a. Direct Health Care Services

Children with Special Health Care Needs:

With regard to access to health care and specialty services, as with any predominantly rural state there has always been a lack of services and service providers in the rural areas of the state. Oklahoma has fewer and fewer small hospitals that are able to survive in the worsening economic situation. The specialty programs funded by CSHCN are not the kind of programs that generate income for a hospital. Without CSHCN funding these programs, if they existed at all, would only exist in the metropolitan areas.

CSHCN had in the past purchased PKU formula and amino acid bars for the total PKU population in the state. In past block grant reviews CSHCN was advised that Medicaid should be paying for medically necessary formula. CSHCN was successful in getting OHCA to pay for most formulas for individuals who have Medicaid coverage, so now CSHCN only pays for very specialized, non-Medicaid compensable formulas for children on Medicaid and specialized metabolic formulas for children who are not Medicaid eligible.

All of the programs CSHCN contracts with report that anywhere from 60% to 80% of the families they serve are on Medicaid. This means that access to specialty care is limited to those services that are compensable under the state's Medicaid program. This is also true for oral health services. The additional concern with oral health is that many dentists will not see children with special health care needs due to their multiple health and behavioral issues.

Although OHCA gives incentives to providers who screen Medicaid-eligible children through the EPSDT program each year, they report that less than 65% of these children receive the screenings. This next year OHCA will be expanding the number of EPSDT screenings allowed in an effort to further encourage providers to do them according to the new periodicity schedule.

Oklahoma CSHCN has a contract with the Oklahoma Infant Transition Program (OITP) which serves infants and families from across the state. OITP's mission is to ease the transition from hospital to home and community-based services and to provide continuity and support for families of infants with complex medical and developmental needs. To meet this mission, OITP provides direct assistance and coordinates other existing services through their family support staff and developmental team.

Tulsa Neonate, another CSHCN contractor, provides a critical and vital service to children with special health care needs. Tulsa Neonate is a comprehensive neonate follow up program for high-risk infants in northeastern Oklahoma. This contract has expanded the capacity of Oklahoma to provide necessary services to the children with special health care needs throughout the state.

CSHCN contracted with several physicians to provide primary care to children in OKDHS custody who reside in shelters. In 2004 over 240 youth were treated each month.

Maternal and Infant Health / Child and Adolescent Health:

One of the greatest emerging needs is for preventive health care and treatment for the MCH populations. Because of the high cost and limited funds, services to children with special health care needs are extremely limited. Providers for these high-risk children are always limited, and access to many of the specialty services is only available in the major metropolitan centers. While some regional services are available, they are grossly inadequate for the children in need of publicly supported health care. State funds to support the Medicaid participation is also limited, and other less costly services are often addressed because the same amount of funding can be spread across a larger number of consumers in need of care. Just as with mental health, the needs are not disputed; finding resources to address those needs continues to be a major issue.

Maternity care across Oklahoma has continued to shrink. A collaborative study of providers is being developed to help determine specific causes for this significant gap. It is currently believed that there are two major factors contributing to the loss of providers, particularly in the rural areas: insufficient Medicaid reimbursement rates, particularly for high-risk mothers, and escalating liability insurance costs. As a result, more pressure is being placed upon the limited MCH funds to fill the gap and provide direct prenatal care services in rural areas. Another problem identified through the OHCA state perinatal taskforce is the cultural barriers between English-speaking providers and Spanish-speaking clients. Lack of adequate translation services causes many providers to be hesitant in providing health care to the Hispanic population. The burden of providing prenatal care through local county health department and rural health clinics has grown greatly. Added to this problem is the lack of Medicaid funding for undocumented clients.

Child health care continues to be a problem. Medicaid managed care has not alleviated the problem of available providers, and limited availability of health maintenance organizations has forced the OHCA to redesign its management of Medicaid-supported health care across the state. Rural families have always been limited to fee-for-service plans with primary care providers for child health care. While the OHCA is required to identify providers for child health care across the state, it cannot guarantee that those providers are readily accessible by the families. As a result, distance to health care is a major barrier. Direct health services provided by the OSDH continue to be limited, with the greatest effort being directed toward assisting families in identifying available private providers who will accept Medicaid and undocumented clients. As with maternity care, state funds have not increased for perinatal or child health care, and increasing costs require services to be reduced accordingly.

Since many rural communities are made up of aging populations with higher rates of chronic health conditions and disability, as well as persons and families with minimal income and lack of transportation, the much needed primary care service centers are

either too expensive or are too far away to access. As indicated in Figure 70, the greatest barrier to accessing direct health care services is the ratio of health care professionals to the number of people in each area. When examining the number of people for each licensed physician, one can begin to see the overwhelming need for those living in rural counties.

Figure 70: Number of people for each licensed physician: Oklahoma 2003
Source: Oklahoma Medical Association, Oklahoma Osteopathic Association

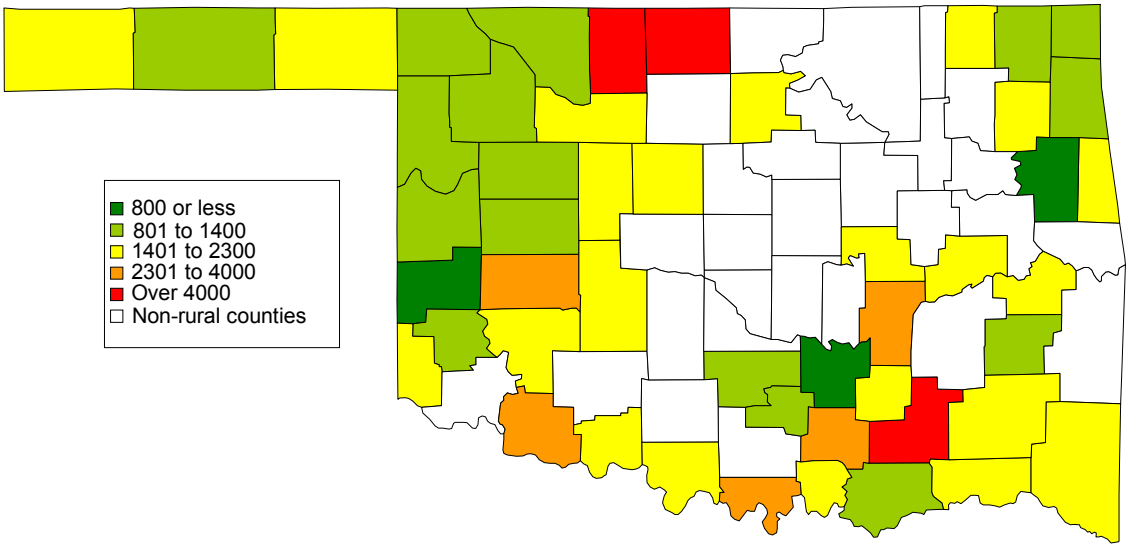


Table 27 gives a good indication of the access to care issues that disproportionately affect those in rural communities versus non-rural communities. The number of people for every physician is 45% higher for those in the rural counties compared to those in non-rural counties; the number of people for every dentist is 76% higher in the rural counties compared to the non-rural counties; the number of people for every nurse is approximately the same for rural and non-rural counties. This burden illustrates the need for better student loan and scholarship incentives for primary care and specialty physicians in the rural communities as well as the need to establish comprehensive health care facilities regionally throughout the state.

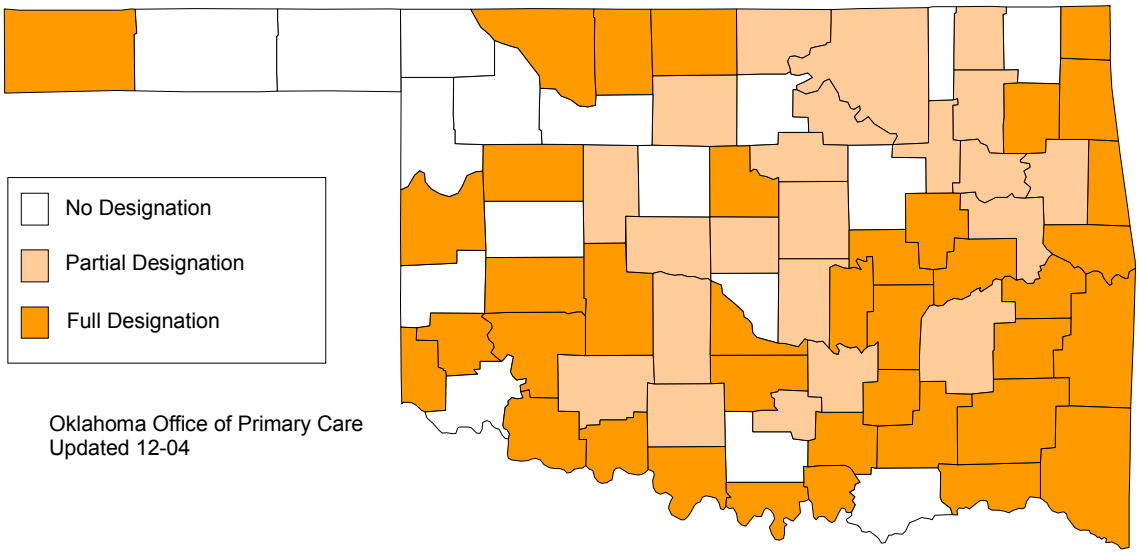
Table 27. Ratio of health care professionals to the population: Oklahoma 2004*

	Physicians	Nurses	Dentists
Entire State	**6582**	**43,349**	**1,707**
	1 physician for every 524 people	1 nurse for every 80 people	1 dentist for every 2,021 people
Rural Counties	**659**	**9,903**	**240**
	1 physician for every 1,175 people	1 nurse for every 78 people	1 dentist for every 3,227 people
Non-rural Counties	**5,923**	**33,446**	**1,467**
	1 physician for every 452 people	1 nurse for every 80 people	1 dentist for every 1,824 people

**Kids Count Partnership, 2004, Oklahoma Institute for Child Advocacy, 2003.*

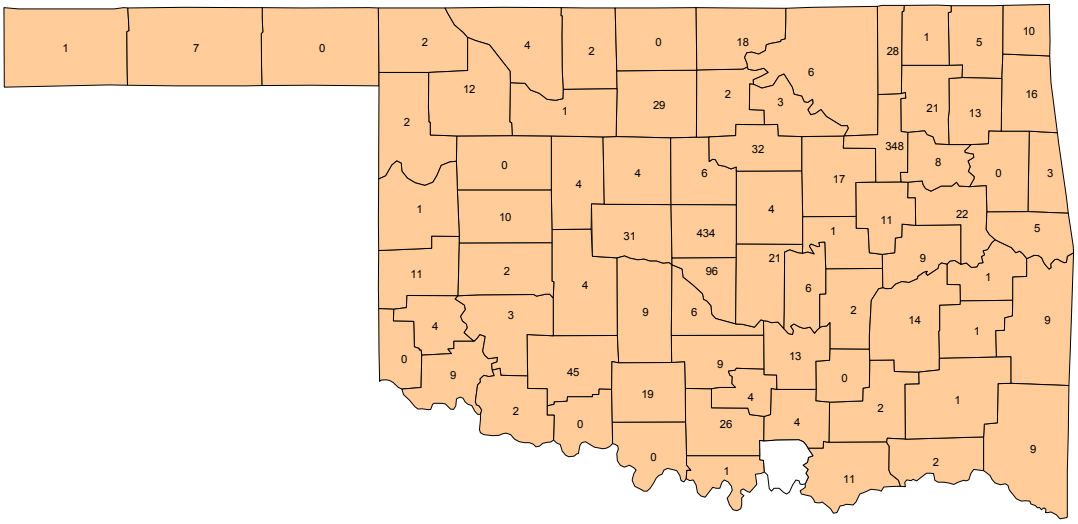
A major portion of Oklahoma has been designated as a Medically Underserved Area as defined by the Bureau of Primary Care Services. Designation of a Medical Underserved Area is determined by the availability of health professional resources within a rational service area. The definition of a rational service area is usually based on a 30-minute travel time. The following map (Figure 71) displays the counties that meet the partial designation or full designation as being medically underserved. This provides further documentation that primary care services cluster in metropolitan areas. The general assessment is that there is an over-supply of primary care services in the metro areas, with rural areas struggling to maintain what limited services remain.

Figure 71. Oklahoma primary care medically underserved areas



Examining the availability of dentists on a county level throughout the state indicates a pressing need within rural communities. In Figure 72, each county has a number representing the number of dentists in that county: the four counties with the largest number of dentists are in major metropolitan areas (Oklahoma City, Tulsa, Lawton, and Moore/Norman). Eight of Oklahoma's seventy-seven counties have no dentists to provide services (Marshall county, shown in White, is unknown). The southeast region and west/northwest region of the state have the fewest dentists available and subsequently a host of access issues: driving time and distance; wait times up to weeks or months; and a lack of providers accepting public assistance payment services. According to the assessment, the state's greatest opportunity of improving the quantity and quality of dental services in rural communities is in providing more meaningful incentives for new graduates coming from the dental colleges. Ten percent or fewer graduates are establishing practices in the rural areas of the state. Until more is done to combat this problem, oral health will continue to be a significant need in the state.

Figure 72: Number of Primary Care Dentists in Oklahoma: 2005
Source: Oklahoma Dental Association



b. Enabling Services

Children with Special Health Care Needs:

In Oklahoma, the rapidly increasing cost of transportation and lack of public transportation systems are two major issues. Most of the CSHCN population must travel to one of the two metro areas to have access to specialty providers. If OKDHS is able to establish eligibility for Medicaid the options for transportation assistance increase because SoonerRide, a Medicaid transportation program, will provide medically necessary transportation for medical appointments and treatment. This access to specialty care has improved the local access to primary care because, while local medical providers are unwilling to manage a medically complex situation, they are, in many instances, willing to handle routine care if specialty care is being provided.

OASIS sponsors parent perspective meetings across the state to allow parents in the outlying areas of the state to get information on new programs and provide feedback on current programs. Childcare vouchers, mileage reimbursement, and lunch are provided to make it easy for parents to attend these one-day meetings. OASIS also maintains a resource data bank and operates a toll-free phone line that is being used as the starting point for a new system that will cross agency lines and eventually allow individuals to make application for many programs and services over the Internet. The long-range goal is for individuals to be approved for eligibility for these services over the Internet.

Oklahoma CSHCN also contracts with OASIS, which is a centralized, accessible and comprehensive information source. Representatives at their toll-free phone number provide referrals that match callers with available programs and providers all over the state. OASIS also houses the Oklahoma Respite Resource Network and coordinates the processing of all applications for respite vouchers from across the state.

Health care providers in the Department of Pediatrics at the University of Oklahoma Health Sciences Center (OUHSC) have partnered with leaders in the Children and Family Services Division of OKDHS and leaders at OHCA to develop the Fostering Hope Clinic (FHC). The FHC was developed based on the medical home model and the American Academy of Pediatrics (AAP) recommendations set fourth in "Fostering Health: Health Care for Children and Adolescents in Foster Care". The long-term goal is that the successful development of FHC can be used as a model that can then be replicated throughout the state of Oklahoma. In addition to the development of the FHC, the OUHSC Child Study Center has a project with the OHCA to survey and train Oklahoma physicians in medical home concepts.

OHCA implemented the Oklahoma Employer-Employee Partnership for Insurance Coverage (O-EPIC) program that pays part of the insurance premiums for eligible employees working for qualified Oklahoma small businesses (with 25 or fewer employees). Within the next year this program will be expanded to include businesses with up to 50 employees as well as a public product that uninsured persons can enroll in and receive insurance coverage.

This year the state legislature passed the Oklahoma Consumer-Directed Care Act that will give recipients of in-home and community-based services the opportunity to select the services and providers they want. As stated previously, DDSD provides services to 3,675 children under age 18 who have a diagnosis of mental retardation. All of these individuals are eligible to receive services through the CSHCN program. Oklahoma continues to struggle with a waiting list for DDSD waivered services; as of this writing there are 805 individuals under age 21 on the waiting list.

The SSI Disabled Children's Program (SSI-DCP), which is funded and administered by CSHCN, helps children from birth to 18 years of age obtain adaptive equipment and diapers. Oklahoma is one of the states where the Medicaid eligibility determination is separate from the SSI determination, so OKDHS relies on referrals from the Social Security Administration to find out which children have become newly eligible for SSI. Just this past year SSA started sending these referrals on a CD rather than in paper form, and the information on the CD is matched with the OKDHS database so letters can be sent to the families of children who are not currently receiving SSI-DCP services.

Maternal and Infant Health / Child and Adolescent Health:

The pull of increasing need for direct health care services impacts the need to expand enabling services. The most readily identifiable need is translation services for the Spanish-speaking migrants across the state. With a growing population of Hispanics, this need continues to grow in rural as well as in the metropolitan centers. The majority of the need is in the Oklahoma City and Tulsa metro areas, but other more rural areas continue to grow. A large number of the rural migrants work in the livestock industry, and this business does not guarantee long-term employment. As a result, it is difficult to predict a stable need for multi-lingual providers and culturally appropriate translators.

Transportation continues to be an issue for various populations, though it is hard to identify by surveys. Transportation is a variable that is dependent upon the economy and available financial resources of poor families who are sliding further into poverty as the rich/poor disparity continues to increase in Oklahoma as well as the nation.
Access to specialty care is particularly difficult for the rural poor. Without a state-recognized system of perinatal care, a high-risk mother often has no option but to deliver in a hospital not equipped to handle a problem birth. Transportation services are not available to assure the mother can be transferred to a facility appropriate for her risks or those of the child.

There is a transportation service that is offered in an attempt to serve Oklahoma's low-income population. SoonerRide is Oklahoma's non-emergency transportation program for people being served by Medicaid. An individual is eligible for SoonerRide transportation services if he/she has a valid Medicaid Card (except Qualified Medicare Beneficiary and Specified Low-Income Medicare Beneficiary-only clients, clients enrolled in SoonerCare Plus, and clients who are institutionalized). Although this service helps many get medical services, who without it would either get inadequate care or possibly no care at all, the service has its limitations, which still leaves many in need of services without consolation. Reservations for routine medical services must be made a minimum of three business days in advance, which can be problematic for some individuals, since often due to work inflexibility, they cannot meet this requirement. Also, since only transportation for the Medicaid client is allowed (children may not accompany adults when the appointment is for the adult), many non-English speaking clients face language barriers when attempting to obtain services. Many of these Limited English Proficiency (LEP) individuals often rely on their bilingual children to serve as their interpreters and therefore receive more adequate services and a less frustrating experience.

c. Population-Based Services

<u>Children with Special Health Care Needs:</u>

SoonerStart is one of Oklahoma's early intervention programs and is designed to meet the needs of infants and toddlers with disabilities from birth to three years of age. SoonerStart is an interagency program with collaboration between the Oklahoma State Department of Education, Oklahoma Department of Health, Oklahoma Department of Human Services, Oklahoma Department of Mental Health and Substance Abuse Services, and the Oklahoma Commission on Children and Youth. The Oklahoma State Department of Education serves as the lead agency for this program.

OKDHS has entered into an aggressive campaign to make all of its local offices easily accessible to the population that they serve. In the metro areas this includes the creation of multiple full service offices. In each of these offices there is staff charged with establishing working relationships with the members of the service community and with

the people served. This improves the flow of information and services giving members of the community an easily available contact.

The OKDHS Aging Services Division conducts a yearly conference for Grandparents Raising Grandchildren and gathers data on this population. There are (based on 2000 Census data) 67,194 grandparents in Oklahoma who live with their own grandchild under 18 years of age and 39,279 are totally responsible for their own grandchild under 18 years of age. Of these, 14,714 have been in this situation for five years or longer. The OKDHS Aging Services Division commissioned a statewide telephone survey of 664 grandparents and other non-parent relatives regarding the housing needs of this population. This survey was done to support an application for a federal grant to build supported housing for this population. One of the interesting facts that came out of this survey is that 78% of the individuals who responded stated they need handicapped accessible housing for their grandchildren.

Maternal and Infant Health / Child and Adolescent Health:

The ability to improve capacity for working with other agencies and organizations involved with maternal and child health services is limited by available funds. Recent years have seen a significant improvement in interagency and organizational collaboration in many areas. One principal mechanism singled out by MCH is the support for building and maintaining Fetal and Infant Mortality Review (FIMR) projects in the Oklahoma and Tulsa Counties. This focus not only contributes to the support of a very important community-driven assessment function, it also confirms the OSDH-MCH commitment in supporting population-based services to the MCH partners and communities across the state.

There is also a need to strengthen the state's Maternal Mortality Committee that has been dormant for more than a decade. MCH will continue to work with the Oklahoma State Medical Association in building a satisfactory solution to revive the Committee and make it a voice for identifying perinatal health and social interventions as well as preventive care throughout the preconception, prenatal and postpartum periods.

d. Infrastructure-Building Services

Children with Special Health Care Needs:

The Oklahoma Oral Health Coalition that consists of members from the Oklahoma Dental Association, CSHCN representatives and CSHCN family members, meets regularly to address the oral health needs of the CSHCN population.

The results gathered from the Oklahoma CSHCN survey showed that families prefer serving on committees and answering surveys as their primary way of contributing to the planning and evaluation process. They also need to believe that provider systems will listen to their ideas before they expend the time and effort to participate, and that they

need training and/or orientation about the services they will be discussing. They also stated they need another family member who has prior experience to mentor them early in the process. Providers indicated that although they understood how to use the family perspective in their practices, it was not clear whether a practical process was in place in service systems to accomplish the ideas expressed by families.

CSHCN contracts with SoonerSUCCESS, an acronym for State Unified Comprehensive Exemplary Service for Special Needs. SoonerSUCCESS is a comprehensive service system that builds community capacity and integrates existing public and private service programs. The project is building a community based infrastructure that coordinates the efforts of the health, mental health, social and education systems in a rural and metropolitan region that includes private services (faith based private foundations, etc.) and generic services (libraries, day-cares etc). They are currently located in seven Oklahoma counties, six or which are in rural areas of the state. SoonerSUCCESS has local advisory councils and local resource coordinators who assist families and individuals in accessing services. CSHCN assisted the project by printing detailed resource directories they developed for each of the counties they serve.

There is another project closely aligned with the SoonerSUCCESS project that is working on a survey to send to pediatricians across the state. The survey was modeled after an AAP national survey about the medical home concept and the data collected will be used to determine interest in and barriers to the medical home model so this project can help providers overcome these barriers.

Maternal and Infant Health / Child and Adolescent Health:

Historical funding of MCH services in Oklahoma has been focused on direct care services. Once established, it is difficult to redirect resources to build necessary infrastructure capacity except by scaling back those clinical services. Agency leadership has also identified community-based direct care as a priority; therefore, carving out funds for population-based and infrastructure services requires significant effort at the program level. Nevertheless, MCH continues to assist in establishing mechanisms to strengthen the state's infrastructure of MCH systems, including direct care, enabling, and population-based services.

One primary area of agency level support for building local systems is the continued support for the Oklahoma Turning Point Initiative. Initially started with seed grants from the Robert Wood Foundation and the WK Kellogg Foundation, the program has now established 48 community partnerships with seven additional communities under development to be in place by the end of 2005. With the continued encouragement from MCH, these programs now are gaining further support from local health department leaders by utilizing personnel funds to add health educators in place of direct service clinicians in areas where private provider, Medicaid-funded care is available. MCH continues to encourage Community Health Services and the local health department

administrators to consider refilling vacancies with staff who have expertise in building local systems of care through community collaboration.

MCH continues to collaborate regularly with the Oklahoma Health Care Authority (OHCA) and the OKDHS to determine barriers and needs for the MCH populations who are financially in need of publicly funded health services. Working relationships with these agencies are very strong and group processes can best be described as true teamwork. With the pervading service-oriented attitude of the OHCA, it has been relatively easy for the OSDH to address needs or other issues, an exception being the sharing of data that contain personal health information (PHI). In addition, the Governor's Cabinet Secretary of Health is also the Commissioner of the Department of Mental Health and Substance Abuse Services; this produces a natural link with the state's mental health services as well.

A major infrastructure problem continually identified is the need for transition services for the CSHCN population who age out of the CSHCN programs and the services mandated under the Individuals with Disabilities Education Improvement Act (IDEA). There is not a system available for families to identify resources for the children-to-adult transition, and often the specialty services are not even available.

MCH utilizes various surveillance tools to monitor and evaluate the care received by the MCH populations. Through the PRAMS, TOTS, First Grade Health Survey, Fifth Grade Health Survey, and the Youth Risk Behavior Survey tools, access to care and utilization of care are monitored. In addition, behaviors and other barriers are evaluated to assist the state in addressing appropriate issues to improve health status and health care. Part of the improvement of evaluation methods is to link Medicaid eligibility and utilization information with the births and infant deaths in the state as well as program services provided through the different programs managed by OSDH, to include maternity, child health, family planning, immunization, and WIC services. This is one area that needs further refinement. The current State Systems Development Initiative grant is dedicated to building and using this link. However, this data sharing process has been difficult to coalesce. HIPAA compliance and other personal information security concerns have prevented a complete and ongoing linkage to occur. In the spring, 2005, the first data were transmitted to the OSDH to begin a trial link of eligibility and claims data. It is expected that initial matching procedures will begin during the summer, 2005, and hopefully this will remove the barriers that have prevented a full and ongoing link of Medicaid and OSDH data.

Selection of State Priority Needs

As described in Section II. B. 1., the priorities were initially organized from the input obtained through the initial group process with partners. Data and other methods of evaluation were used to validate the initial assessment of the group process. Then in late spring, 2005, the initially selected priorities were evaluated one final time by the MCH and CSHCN staff. This meeting served to compare the final priorities selected with the overall input from the group process. Adjustments were made and the priorities were

modified to best fit the needs identified by the partners while maintaining agency and state legislative priorities, and recognizing actual capacities of the MCH and CSHCN programs to affect change on the issues chosen. Also, history of the programs over the past five years helped select priorities that have been regularly identified by partners and communities. The following table reflects the current priorities of Oklahoma's MCH programs with those that have been initially selected for the next five years (Table 28). It is understood that needs are dynamic, and priorities may need to be adjusted more regularly than every five years. The significant change in priorities is not intended to suggest that the former priorities have been adequately addressed or are no longer areas of concern. Instead, the new issues have now grown to a higher level of importance based upon the conditions of current systems of care and the health status of the three MCH populations.

Table 28. Oklahoma Title V Priorities for Program Years 2006 and 2005

Proposed PY 2006-2010 Priorities		PY 2005 Priorities
1	Reduce the prevalence of obesity among the MCH populations	Decrease adverse pregnancy outcomes
2	Reduce substance abuse behaviors in the MCH populations	Reduce childhood injuries
3	Improve access to dental health services by pregnant women and children	Decrease unintended pregnancy
4	Increase access to prenatal care	Decrease health risk behaviors in the MCH population
5	Improve the system of respite care for CSHCN families	Decrease relationship violence
6	Improve transition services for children with special health care needs	Reduce health disparities among racial/ethnic groups, socioeconomic groups, and geographic areas
7	Reduce unwanted, unplanned pregnancies	Promote healthy, stable relationships among all family members
8	Increase the proportion of fully immunized children entering school	Increase access to comprehensive health care services for MCH/CSHCN populations
9	Increase the proportion of mothers who breastfeed their infants	Improve transitional service systems for CSHCN
10	Improve data access and file linkages of public health databases	

The entire assessment process required input for all three MCH populations. The review of the results allowed priorities to be considered of equal importance from each of the three teams. No preference was given to a specific population group, and the resulting priorities are not scaled to reflect any one priority being of higher importance than another. Representation within each team assured that all service levels of the pyramid were equally considered. Priorities were not selected solely for the reason that they

represented a specific pyramid service category. However, the final priorities do reflect needs for direct services, enabling services, population-based services, as well as infrastructure building. The MCH and CSHCN programs do not consider any issue singular in nature that would require only one service level to accomplish adequate results. Most priorities require infrastructure to initially address the need, followed by direct, enabling, or population-based services to demonstrate solutions to both consumers and providers**.**

C. Needs Assessment Summary

The Oklahoma needs assessment for the proposed PY 2006-2010 period resulted in setting a series of newly identified priorities. These priorities were largely determined by more than 85 partners and stakeholders who were invited and participated in providing a system-wide perspective of issues for the MCH populations, and they were familiar with the scope of services provided by the MCH and CSHCN programs. While a majority of the currently identified priorities are no longer listed, they have become no less important. Reducing health disparities is an overarching Healthy People 2010 priority, and it is still sentinel to Oklahoma MCH policy. Two other priorities have been refocused, though the former intent is still present in the newly framed priorities; these are the reduction of adverse pregnancy outcomes and the reduction of health risk behaviors in the MCH population. The revised priorities are more targeted and will hopefully address specific activities to ultimately improve the programs' outcomes (Table 29). Additionally, the reduction of childhood injuries remains an important component in the scope of children's needs, and the need will not be ignored only because it is no longer on the list of top ten priorities.

Table 29. Oklahoma Title V Priorities: Program Years 2006 and 2005

Proposed PY 2006-2010 Priorities		PY 2005 Priorities
1	Reduce the prevalence of obesity among the MCH populations	Decrease adverse pregnancy outcomes
2	Reduce substance abuse behaviors in the MCH populations	Reduce childhood injuries
3	Improve access to dental health services by pregnant women and children	Decrease unintended pregnancy
4	Increase access to prenatal care	Decrease health risk behaviors in the MCH population
5	Improve the system of respite care for CSHCN families	Decrease relationship violence
6	Improve transition services for children with special health care needs	Reduce health disparities among racial/ethnic groups, socioeconomic groups, and geographic areas
7	Reduce unwanted, unplanned pregnancies	Promote healthy, stable relationships among all family members
8	Increase the proportion of fully immunized children entering school	Increase access to comprehensive health care services for MCH/CSHCN populations
9	Increase the proportion of mothers who breastfeed their infants	Improve transitional service systems for CSHCN
10	Improve data access and file linkages of public health databases	

The process for priority selection for the previous block grant application differed significantly from the one used for the PY 2006-2010 period. For the previous application, the needs were first quantified by the MCH and CSHCN assessment staff. Initial issues were targeted by program staff from each of the three population groups, and evaluation and analyst staff were assigned the responsibility to research all possible data sources. The data were reviewed internally by program staff, and the priorities were selected with performance measures built around those priorities, focusing upon improving the outcome measures.

For the PY 2006-2010 application period, input from external partners was obtained as a baseline for setting priorities. A large group of individuals representing providers, families and consumers, internal agency partners including local public health providers, other agencies, and advocates provided their perspectives of the MCH systems and its needs to the MCH and CSHCN programs. From this baseline, the programs then worked to analyze data and assess need based on quantitative and qualitative sources. This process assured input from multiple partners, including the invited groups in Table 30.

Table 30. Invitees to Oklahoma Title V Needs Assessment Process

Oklahoma Primary Care Association	Oklahoma Institute for Child Advocacy	Oklahoma State Medical Association
March of Dimes	Healthy Start projects	AHEC projects
Planned Parenthood	Latino Community Development Agency	Oklahoma Infant Transition Program
Oklahoma Development Disabilities Council	Oklahoma City Indian Clinic	Variety Health Center
Tulsa Community Services Council	Health for Friends/ Better Babies	University of Oklahoma Health Sciences Center
Oklahoma Perinatal Continuing Education Program	Central Oklahoma Perinatal Coalition	Oklahoma Areawide Services Information System
University of Oklahoma Medical Center	Children's Medical Center	Family Care Services
Covering Kids and Families	Tulsa Neonatal Follow-up Clinic	Oklahoma Children's Hospital
J.D. McCarty Center	University of Oklahoma Child Study Center	Center for Learning and Leadership (LEND)
Oklahoma Department of Mental Health and Substance Abuse Services	Margaret Hudson Program (teen parenting)	Tulsa City-County Health Department
Oklahoma Health Care Authority	Healthy Beginnings	Children First (OSDH)
Screening, Special Services and SoonerStart (OSDH)	Dental Health (OSDH)	Oklahoma City-County Health Department
Tobacco Use Prevention (OSDH)	Child Guidance (OSDH)	Oklahoma ABLE Tech (assistive technology)
Children's Hospital Sickle Cell Clinic	OU Child Study Center	Oklahoma Department of Human Services
Oklahoma Commission on Children and Youth	Oklahoma State Department of Education	Guthrie Job Corps
Youth Services (Tulsa)	United Way	National Indian Women's Health Care Resource Center
Schools for Healthy Lifestyles	Indian Health Service	Oklahoma City Area Inter-tribal Health Board
Community Health Services	Oklahoma Poison Control	Tribal Health Centers (Kiowa, Kickapoo, Absentee Shawnee, Chickasaw, Black Hawk, Choctaw, Citizen Potawatomi, Cherokee)

The state's analysis of data from the various sources was not used to determine priorities; instead, they were used as reference to confirm the identified needs as being high "risk" areas and justified as being priorities. The data analyses also were used to identify other areas of concern that must be considered, even though they were not part of the top ten named priorities. It also serves as a benchmark to continually monitor the health status, health systems, and other essential indicators for Oklahoma for significant changes that require further investigation or intervention.

Agency capacity to address the priorities, performance measures, indicators, and outcomes has not varied significantly since the previous application period. The greatest

change has been to realign the services within the OSDH and the Maternal and Child Health Service, formerly known as Family Health Service. The change has narrowed the focus of MCH services to the more traditional approach, thus removing several previous priorities that represented the expanded responsibilities of the former service unit. State funding has not shifted significantly to require resource realignment. The OSDH-MCH Service continues to encourage local health units to become more involved with infrastructure building and population-based services. The OKDHS-CSHCN Program has also been only modestly affected by some agency realignment and staff appointments, but the Program itself has remained stable and well identified within the agency.

D. Health Status Indicators

The Title V designated health status indicators are reviewed regularly and informally as an integral assessment of program monitoring throughout the grant cycles. These indicators are a limited representation of the issues that must be tracked routinely to learn of important changes in health status that may be the result of system changes, including health care access, changes in the population or socio-economic shifts of sub-populations. These changes are dynamic and the MCH programs receive relatively rapid feedback from local providers when significant changes impact the MCH health care structure. Moreover, MCH encourages local communities and local public health providers to monitor these same issues to better address changing needs and to assist the Title V administration staff in adjusting programs and funding as needs indicate. While the specific indicators are faithfully reported, some are not recognized as being strong indicators for the MCH programs. For example, the number of TANF families is not that useful for planning due to the program restrictions placed by the state. Also, the number of high school dropouts is of limited value because of known issues allowing local school districts to provide information that may not be truly representative of the number of school-aged children who have been lost to the education system. In lieu of these limitations, the state frequently locates other data that can be used as a proxy for these important issues. These alternate resources also frequently provide more detailed data that allows assessment to the county level.

E. Outcome Measures

Following the selection of the priorities for the next five years, MCH/CSHCN then reviewed the national performance measures and the most recent state performance measures to assess their ability to address the new priorities. Each measure was matched to the priorities to evaluate their effectiveness in making a positive impact on each priority. Performance targets are nominally set to challenge the Program in making improvements, given the limitations created by static objectives within the agency setting. At times, unexpected changes in policy or other external factors (economy, funding of associated programs, etc.) may make the performance objectives appear ill conceived. However, MCH attempts to monitor these factors and adjust when appropriate.

The state has not selected any additional outcome measures beyond the federally established six measures. One of the limitations of outcome measures for MCH programs is that they tend to be mortality-based. Because public health is prevention-oriented, Oklahoma has not been able to select additional outcome measures that it believes are indicative of its goals. In addition, many variables have positive and negative effects upon the outcomes specified that are beyond the control of MCH. Thus, MCH must be responsive to external change that impacts outcomes, and it must use its resources to adjust and provide gap-filling services or to change systems where possible and most effective.